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## PART FIRST.

## ORIGINAL COMMUNICATIONS.

ART. I.—*Review of the Climate and Diseases of Certain Portions of the State of California.* By F. W. HATCH, M.D., Sacramento City, California.

THE CLIMATE of a particular region of country, depending, as it does, upon conditions varying with its equatorial relations,—its soil, elevation, cultivation,—its proximity to the Ocean,—the prevailing currents of wind, and the many phenomena and modifications which arise from these conditions, presents a field for study so vast, as scarcely to admit a just and intelligent investigation within the limits of a short essay, without more enlarged and extensive means for examination than those we have been enabled to obtain.

The difficulties attending such an investigation, growing out of the intrinsic nature of the subject, are here, in California, greatly increased by extraneous circumstances peculiar to the State. But a short time since emerged from a condition of semi-barbarism, and attracting to its shores a large influx of population, eager in the pursuit of wealth, and with no abiding interest in the country, no attachment beyond the realization of their golden dreams, it has, until

recently, presented a meagre field for the cultivation of science, or for intellectual improvement. The passion for gold —the thirst for riches—absorbed every other emotion of the soul, and in the hot and entrancing pursuit, the opportunities which might have been possessed by the earlier settlers for recording facts relating to the climate of the State, during a succession of years, were, for the most part, if not entirely, neglected.

The want of the instruments necessary for scientific investigations, and the expense attending their procurement in this State, has, also, greatly retarded the acquisition of correct information, and prevented the prosecution of those meteorological observations so essential to the proper understanding of the subject under consideration. With these difficulties in our way, we shall not attempt a consideration of all the phenomena which modify the character of the climate of California, and which involve an intimate study of its physical condition and peculiarities, but content ourselves with a brief review of some of its more prominent features, considered in a medical point of view;—its influence in the production of disease and as a beneficial agent,—its pathologic and therapeutic tendency. Even with this limited view of the subject, there is scarcely a region in the world presenting so great a variety in its climatic features, where extremes are so marked, where the physical constitution of the country is so diversified within an equal area, as in California.

Bounded on the West by the Pacific Ocean, and extending from the 42d parallel of latitude on the north, its northern limit, to the 32d on the south, its southern boundary, and stretching east to the summit of the Sierra Nevada, in the 120th meridian, east longitude, it presents a diversity of geographical arrangement, of temperature, and of the various other elements which mark the peculiarities of different climates, but seldom observed within the same parallels of latitude and longitude.

It is a fact, frequently noticed, that countries on the

Pacific side of the great chain of mountains which divide the eastern from the western section of North America, vary remarkably in temperature from regions on the Atlantic side, similarly located, in respect of latitude and elevation; the former presenting a temperature and atmospheric dryness, strongly contrasted with localities under the same conditions in the latter. This fact is amply exemplified by the difference observed between the winters in this country, and those in the same latitudes east of the Rocky Mountains. Regions of country, in a latitude which, on the Atlantic, exhibit, during the winter months, frequent snow storms, and a thermometrical descent to several degrees below zero, are in the other division noted for the mildness and equability of their winter season; snow is seldom seen, the ground rarely frozen, and vegetation, though checked for a time, is speedily renewed under the quickening influence of the periodical rains and warm sun which succeeds them. Compare, for example, the climate of St. Louis, of Washington, or even of Charlottesville, Va., with that of Sacramento, in this State. Though the difference in latitude is, in either, less than half a degree, yet how great is the difference observable in the extremes of temperature! Less in the case of Charlottesville than in either of the others, yet, even there, the extreme of winter is in wide contrast with Sacramento; and it is not very uncommon for considerable snow to fall. Even as late as the second of March, we have seen the ground completely covered with a snowy mantle.

In forming an estimate of the climate of California, however, the geographical arrangement of the country, and the winds prevailing in different localities, must be particularly noticed. Embracing within its limits the latitudes of Savannah and Boston as its northern and southern extremes, it presents a variety of climatic phases but little corresponding with its equatorial relations, or with the latitudes it comprises.

These opposite characteristics are often most obvious in localities situated within a comparatively short distance of

each other, and depend upon their different elevation, or their respective exposure to the winds from the ocean. At San Francisco, for example, in latitude 37° 47′ 35″.6, the climate differs widely from that of localities only a few miles in the interior. In the former, during the summer season, the high winds which rush down the bay from the ocean, loaded with oceanic vapor, create so great a degree of chillness as to render the warmest clothing necessary for comfort. The peculiar position of the city is such, indeed, as to give to this locality a climate whose features are, in some respects, remarkably different from any other portion of the State. Situated on a bay which extends north and south a distance of more than seventy miles, it is secluded from the ocean by a mountain barrier, except at the break or gap in which the city itself is built. Through this gap the bay communicates with the ocean by a strait, a distance of some four or five miles, allowing a free and uninterrupted current for the winds which pour in from that quarter during the greater portion of the year. These winds, rushing down the bay, loaded with vapor, create a degree of chillness in the atmosphere, during the summer months, more especially, in wide contrast with that which prevails in localities sheltered from the ocean, and the strong west and north-west winds which proceed from it. Indeed, it has been remarked that the vicinity of the Golden Gate is colder during the summer months than any point on the Pacific south of Columbia river.

A series of papers published in a weekly journal in San Francisco, by Doct. H. Gibbons, of that city, furnishes minute and interesting statistical information of the climate of the place and its immediate vicinity. Of these we shall freely make use, as affording, at a glance, a summary of great value in studying the peculiar features the locality presents. They refer to the winds, the barometrical phenomena, and the temperature, and, from the well known ability of their author, and the accuracy and care with which his investigations have been pursued, are more reliable than any others

we possess. The observations upon which they are based were taken at sunrise, at noon, and at 11 P.M., and embrace a period of fourteen months, viz., from Dec. 1850, to Jan. 1852, inclusive.

The barometrical phenomena, being devoid of any striking peculiarities or deviations, we shall omit. The range of this instrument is but slight, and not calculated to shed much light upon the present subject.

The mean temperature for this period we condense into the following Table. The thermometer was Fahrenheit's:

| 1850. | Sunrise. | Noon. | 11 P.M. | Month. Tem. | 1851. | Sunrise. | Noon. | 11 P.M. | Month. Tem. |
|---|---|---|---|---|---|---|---|---|---|
| Dec. | 43·29 | 54·13 | 45·39 | 48·71 | Aug. | 54·97 | 69·45 | 56 06 | 62·21 |
| 1851. Jan. | 41·68 | 56·94 | 44·90 | 49·31 | Sept. | 53·97 | 69·27 | 54·20 | 61·62 |
| Feb. | 41·97 | 60·03 | 43·64 | 51·00 | Oct. | 53.36 | 70·42 | 55·45 | 61·89 |
| Mar. | 44·00 | 63 68 | 44·84 | 53·84 | Nov. | 48·93 | 63 60 | 51·90 | 56·26 |
| April. | 48·20 | 67·27 | 49·80 | 57·73 | Dec. | 46·10 | 56·55 | 48·26 | 51·32 |
| May. | 49·58 | 64 32 | 50·42 | 55·95 | 1852. Jan. | 44·61 | 56·97 | 49 39 | 50·79 |
| June. | 50·90 | 66·73 | 51·80 | 58·81 | 1851. | | | | Yearly Tem. |
| July. | 51·50 | 64·32 | 52·10 | 57·91 | An'al. | 48·76 | 64·38 | 50·2 8 | 56·57 |

In an examination of the above table, one of the most striking features of the climate will be observed in its equability. The highest monthly temperature for 1851 is shown to be 62·21 (August), the lowest, 49·31 (January), being a difference of only 12·90. The warmest day in the year 1851 was April 28th, the thermometer reaching 84°; on the 19th of October, it reached 83°; on the 18th of August, 82°. The mercury rose to 80° on only nine days in the year, of which six were in October. The lowest temperature of the year was 30°, the highest 84°, the range being 54°. On only twenty-five mornings did the thermometer sink as low as 40°. The warmest month in the year was August, then October, then September; and it will be observed by the table that between the first two of these the difference

was less than one degree, while between August, the warmest, and September, the coldest of the three, it is but little more than half a degree. At sunrise at San Francisco, in 1851, the mercury stood at 53° on forty-five mornings, at noon it was 64° during forty-two days. There were one hundred and sixty-one mornings with a temperature varying from 50° to 54°.

The above facts show the great equability of the temperature at San Francisco, and, based as they are upon the observation of one so reliable as Dr. G., form a valuable record for reference. In scarcely any region in the Atlantic States is so great a uniformity observable, so slight a variation between the extremes of heat and cold. Yet are the diurnal depressions of temperature in the afternoon sometimes considerable. In the summer months the early morning is ushered in calm and generally clear, with a bright warm sun. From twelve to one o'clock the winds from the ocean come rushing down the bay, and, bringing with them thick clouds of oceanic vapor, quickly depress the thermometer and completely change the character of the atmosphere. At these times the mercury will suddenly fall from 60° to 65° down to 50°, where it usually remains all night. On the cessation of the winds, in or about October, the weather is again delightfully equable and fine; vegetation springs up under the refreshing influence of the rains which soon succeed, and the hills, throwing off the dry and yellow mantle which a burning sun imposed, smiling in verdure, once more resume the fresh green livery of beauty and loveliness. With remarkable equability of temperature, the weather continues until April, when again the ocean winds renew their sway, and the air is chilled by the vapors which accompany them.

Neither the limits nor the intent of this paper will admit a minute record of the daily or even monthly course of the winds at this point. A few observations will suffice to show their general habitudes, and illustrate what has been already intimated as to their prevalence at certain seasons.

It may be proper to observe that the direction of the coast

is N.W. and S.E. nearly, and that, in consequence, winds from the N.W. to S. come from the ocean, those in the opposite direction being land breezes. The observations before us indicate the prevalence of ocean winds for more than three-fourths of the year, a regular increase being observed from January to September. During the interval between these extremes, it would appear that the land winds prevailed only twenty-five and two-thirds days, while the number of days for those from the ocean was one hundred and eighty-six and one-third. During the remainder of the year the predominance of the land winds was only during forty-six days to one hundred and seven from the ocean. The former are generally warm and dry, while the latter, which are usually from the west, are always cool, and loaded with vapors from the ocean. It should be observed that the winds seldom rise before noon, or continue after sunset.

In respect of rain, there cannot be that difference observable between the locality of San Francisco and places in the interior that is noticed in the temperature and the winds, though there the rainy season ordinarily sets in a little earlier and continues later in the year. In the valley of the Sacramento, for example, it would be an unusual occurrence for the rainy season to commence before November, or to continue longer than the month of April, while at San Francisco and on the coast it is not uncommon for them to embrace a larger period of the year. Occasional variations are observed in this respect even in Sacramento. Thus, the 20th of May, 1853, closed the rainy season of that year, while as early as the 15th September, 1853, a slight rain betokened the approaching rule of the storm-king. They are usually accompanied by a wind from a south-easterly direction, and their abatement may at any time be predicted when the current sets in steadily from a northerly or north-westerly point. There exists a very erroneous impression of the character and continuance of the rains of California, especially as to the amount of rain which annually falls. There is indeed no exact uniformity in the annual quantity of rain in this coun-

try, yet we believe the number of inches of rain which fall annually in this climate is vastly less than in most, if not all, the States east of the Rocky Mountains. At San Francisco, during the year from April 1st, 1851, to the same date in 1852, there fell 19·84 inches. Admitting this to be a fair average, it exhibits a very great contrast with the amount observed in regions of country on the Atlantic. At Cambridge, Mass., in 1852, the amount of rain was 40·507 inches; at Savannah, Ga., 42·201 inches.

The duration of the rains here is also very variable, as well as their severity in a given period. They seldom last longer in the valley of the Sacramento than forty-eight or sixty hours, often not more than twelve, or even less than this, and exhibit during their continuance a very great irregularity, sometimes coming down in spasmodic showers, now pouring as if the flood-gates of the clouds were opened, and then dispersing, for a time, before the beams of the sun, which break through their misty canopy. A frequent and irregular recurrence of such a series usually makes up the sum of a rainy day or period, after which there is an interval, varying from two or three days to a fortnight, of fine, clear, and delightful weather. Indeed, during the interval thus established between the rainy periods of the season, we have our finest weather. The air is clear and bracing; fresh and invigorating breezes infuse health and elasticity into the frame, and a warm sun, acting upon the moist rich earth, starts into life the dormant energies of the vegetable kingdom.

We have digressed thus far for the purpose of showing some of the peculiar features which characterize the climate of the locality of San Francisco. The observations noted embrace most of the points of interest involved in its history, and it will be seen hereafter in what important particulars the climate differs from some other portions of the State. The influence of the different seasons upon the health of that city, as exhibited in an abstract of the annual mortality, will form a subject for future consideration.

It may not be uninteresting to notice a few of the leading

geographical peculiarities of the country out of San Francisco. They may be sketched in few words, and will serve to explain the great differences existing in the climate of different localities, and prove of interest in their bearing upon the diseases which prevail.

Passing over the strip of country near the ocean, which is diversified by rolling hills intersected by rich valleys and plains, a beautiful region of country, unexcelled in fertility, the first range of mountains is the coast range, running at a varying distance from the Pacific, of from thirty to forty miles, and parallel with it. Its elevation is exceedingly variable, rising in the towering peak of Mt. Diablo to a height of more than 3,000 feet above the ocean level. The whole range is but a continuation of the central chain of Lower California, and is finally merged in the Klamet range of Oregon. At its base lie the rich and fertile valleys of the San Joaquin and Sacramento. These valleys, extending east to the foot hills of the Sierra Nevada, constitute one of the finest portions of the State. Stretching from the south in a north-westerly direction for a distance of three or four hundred miles, and watered by the San Joaquin and Sacramento rivers, they are unsurpassed in fertility of soil, in the exuberance of their vegetation, and in their adaptation to the successful pursuit of agriculture, by any portion of the world. Nowhere are the labors of the husbandman more amply repaid, nowhere are to be found the elements for the cultivation of a greater variety of productions, than those furnished by the deep alluvium which covers their surface, and the genial atmosphere which surrounds them. Yet beneath these very elements of prosperity may be sought the source of the principal maladies which exist in this region. Starting into activity under the burning rays of the sun, and wafted alike by the winds which come up from the ocean, and the breezes which flow from the Sierra Nevada, a noxious miasm is exhaled from the decayed and decaying vegetation, which constitutes a fruitful cause of disease among those most exposed to its influence.

The surface of the country in the immediate vicinity of the

two principal rivers flowing through these valleys is generally low, and, for miles in extent, in many parts of their course, covered by marshes, or *luláres*, in which grows in great exuberance a species of bulrush, or *lule*, as it is called, *Scirpus lacustris*. The severe and long-continued rains which fall during the winter season, and the melting snow which pours down from the mountains early in the spring, cause a general overflow of the banks of the rivers, frequently submerging the country for great distances. To the exhalations which arise from the intense action of the sun, during the dry season which so soon succeeds the rains of winter, upon the large deposits of water and upon the vegetable matter spread over and beneath them, may, we believe, be attributed most of the diseases met with in the summer and fall months.

East of these valleys, and at a distance varying from fifty to eighty miles, lie the foot hills of the Sierra Nevada, which raise their huge sides and snow-capped summits along the Eastern boundary of the State. The transition is extreme. In the plains, whose luxuriant fields are spread out at their base, a verdure almost perpetual reigns, and the smiling earth rejoices in the rich and exuberant harvest, or the brilliant display of wild-flowers which lavishly decorate her beneficent bosom. Here the severity of winter is never known; the frosts, which in equal latitudes on the Atlantic side cast gloominess and a blight upon the face of nature, are here but seldom seen, and the autumn and spring glide gradually and imperceptibly, without striking deviation, one into the other. While aloft, on the broad summit of the mountains, in the same latitude, but elevated thousands of feet above, lie unmeasured depths of snow, from year to year accumulating, glittering beneath the bright rays of a summer's sun, in striking contrast with the vegetation which flourishes below. Standing in the centre of the valley of the Sacramento, at midsummer, with the thermometer at 100° in the shade, the eye of the beholder is surprised by the bright columns of snow which sparkle in the distance, high

above him, far off on the lofty ridges of the Sierra, or, nearer still, on the highest peaks of the foot hills which fringe their western sides,—the region of eternal frost,—the resting-place of perpetual snow. Between these hills themselves, and the valleys which separate their rolling heights, the extremes of climate are equally striking; there is the same thermometrical difference during the summer months. The heat of the sun, which pours down, unobstructed, upon the deep valleys, is often intense. A sultry atmosphere prevails, the temperature during the morning hours is oppressive, and the miners in the gulches are mostly unable or unwilling to pursue their labors during the heat of the day.

From this rapid and imperfect sketch, some idea may be gained of the general topography of the country,—its geographical features, and the variations existing between different portions in respect of temperature and elevation. The data upon which to base a history of the climate of different portions of the State, and its relation to disease, are extremely defective. Statistical facts are wanting, or incomplete, and necessity compels us, in many instances, to rely upon the general facts which come to us in an authentic form, and upon personal observation. Out of San Francisco, the most interesting portion of the State, which can form the subject of an investigation of this nature, is the valley of the Sacramento. Whether considered in the view of its population, its position, its agricultural and commercial importance, or the attractive features with which the prodigal hand of nature has enriched it, no other portion of the State is so well entitled to careful consideration. If to these we add the character of its diseases, we may find, in examining some of their more prominent causes, and their mortality, a large and interesting field for contemplation.

A general description of the location of this valley has been already given, particularly of that portion in the immediate vicinity of the Sacramento river. But it would be erroneous to suppose that the whole of the valley is ever subject to overflow, or in any way affected by the annual

rise of water in the river. In by far the greatest portion, the land is high, and at all seasons dry. Beyond a mile or two of the river, there is a large extent of country whose broad plains are unaffected by the rains of winter, and where no marshes or standing bodies of water are to be seen. The principal low grounds are on or near the banks of the Sacramento, and in the broad *luláres*, which extend, in some places, for several miles in extent, and whose waters are emptied into the river. During the summer season, they are most of them dry and passable, but, filled by the rains of winter, and the overflowing of the swollen rivers, they are for the greater part of the year covered with water. Thus supplied from the rivers, they become the receptacle of large deposits of vegetable matter, which, swept down the current, lodge among the rushes, and, on the subsidence of the waters, form, together with the decayed products of their own soil, an abundant source of miasmatic exhalation. Along the immediate vicinity of these sources of malaria, its effects are distinctly seen in the diseases which prevail,—the intermittents and remittents, and their sequels, which affect those residing within the sphere of its influence. This influence appears, in most instances, to be strictly local, or to extend, at least, but little beyond its original seat. The healthful atmosphere which prevails beyond, and in the higher portions of the valley, is fully attested by the almost entire immunity of the inhabitants from disease of any kind. Indeed, there is no part of California more salubrious than many portions of this valley. Nowhere is the annual mortality, in proportion to the inhabitants, less; nowhere is there a purer, more invigorating, health-giving atmosphere. This fact may be fully shown by statistical records of mortality, and is apparent in the unmistakable evidences exhibited by the population.

Surprise has often been expressed by residents of this valley, and especially by those in the immediate neighborhood of the river, at the apparently slight increase of disease which sometimes succeeds its overflow, after a rainy season

of unusual severity. So true is this, that it constitutes one of the most striking features of the climate, and has frequently been the occasion of a doubt, or even of absolute denial of the influence of the floods on the health of the country, or of the presence of malaria in the emanations which arise from them. It is indeed difficult to account for the remarkable exemption occasionally observed under circumstances which, by all the processes of reasoning commonly adopted in prognosticating the chances of disease, would seem to indicate, with the unerring certainty of cause and effect, its alarming increase. What influence the prevailing winds, or the early subsidence of the inundations, and the consequent drying of the soil before the sun of summer has attained its greatest intensity, may have upon the solution of this question, is yet the subject of a theoretical opinion merely, and, perhaps, not perfectly substantiated by the limited array of facts which can at present be made available in its discussion. In the lower situations bordering upon the river, the manifestations of malaria are abundant. Yet, in Sacramento, in the winter of '51 and '52, and again in '52 and '53, although a portion of the city was, until late in the season, covered with water, there was no such alarming augmentation of those peculiar diseases usually supposed to be of malarious origin as was universally predicted. In any other country in the world, situated in a temperate latitude, subject to the like apparent causes of disease, the population would have been inundated and overwhelmed by the severity and universality of the pestilential influences.

We do not consider; at this time, or in this connection, the cholera, which made its appearance in this city in the summer of '52. Its dependence upon marsh miasm is rendered more than improbable by the recorded history of the disease, and its progress under all circumstances of climate, locality, and season, as well as under all recognized atmospherical conditions. That this want of connection between the inundations to which this city has occasionally been subjected, and the subsequent presence of cholera, is frequently lost

sight of, is clear, and will satisfactorily account for the erroneous impressions entertained by many unacquainted with the medical history of the valley, as to the healthiness of the climate. In the fall of 1850, the cholera raged here with fourfold the violence of that in '52, and yet it was preceded, not only by no flood, but by a winter of unusual dryness.

Yet, to certain portions of the valley, subject to overflow, and in which there is a large extent of low and wet ground during a greater portion of the year, these remarks do not apply. In these, the continued presence of water in the marshes during the summer, and the generation in them of malarious miasm, are intimately associated, and the results are too plainly evinced in the frequent occurrence of the more active forms of periodical disease during the autumnal months. Following the course of the river towards the N.W., for nearly one hundred miles, we find at Colusi, for example, a marked difference in this respect from what is observed at Sacramento, which may be considered, practically, to occupy a central position between the former place, and the affluence of the river into Suisun bay. Situated in a rich alluvial district, in the immediate neighborhood of extensive marshes, which are covered for a long period of the year with water, the recurrence of each autumnal season is marked by the almost universal prevalence of periodical diseases and their congeners. Intermittents and remittents often assume their most malignant forms, and their remote effects are seen in the organic congestions, the visceral enlargements, and the dropsical effusions which ensue. The winds which prevail during the summer, as we are informed, are usually from the N.W., warm and dry; its remoteness from the bay secludes it from the cooling influence of the southerly winds, which, at Sacramento, are so grateful during the evening; the days are extremely hot, and though the mercury falls towards evening, the difference observed between the temperature during the day and night, so refreshing nearer the ocean, is much less prominent.

There is no portion of this valley, studied with reference

to the diseases annually prevailing, of greater interest than Sacramento. In population the second city in the State, located in one of the richest valleys, the business mart of the vast extent of country in the interior, and the central rendezvous for the influx of immigration which annually pours in from the plains, or is brought to our shores by the ocean steamers, it is invested with an importance which is exceeded by no other city or region in California. In a medical point of view this interest is maintained by its local features and the diseases which prevail.

The general characters of the locality of the city have been already referred to in the preceding pages. Its situation is on the eastern side of the Sacramento river, whose banks for miles north and south (or rather N.W. and S.E.) of the city are low, and subject to occasional inundation from the rivers and the melting snow from the mountains. The water, thus spread over the adjoining country and in the *lulàres*, remains upon the surface for some time after the subsidence of the river itself, and the surrounding lands being lower than the river banks, its dissipation is left to the gradual processes of evaporation and interstitial exudation. Such is the character of the land immediately south and north of the city. On the east it is generally higher, and extends in wide plains, with varying elevation, interspersed with occasional meadow lands, to the foot hills on its further boundary. The elevation of the city above the sea is, according to an observation which has been shown us, about twenty feet, its latitude 38° 34′ 40″, its longitude 121° 48′ 11″. The permanent population of the city is from ten to twelve thousand.

The climate of Sacramento, in many respects, excels that of any other portion of California. Exempt from the extremes of heat and cold which are observed in other portions of the State, the seasons here are remarkable for their equability and uniformity, gliding gradually one into the other, without abruptness, and without those sudden changes often so marked in the Atlantic portion of America. Compared with

each other, the temperature of different years is remarkably uniform. Contrasting the seasons themselves in any one year, the greatest thermometrical deviation will be observed during the summer months, between the periods of sunrise and noon, and between noon and a late hour of the night. Indeed, one of the most striking features of our summer climate is seen in the descent of the mercury a few hours after sunset. In the latter part of the afternoon, or towards evening, a brisk southerly breeze usually sets in from the ocean, rapidly replacing the atmosphere which an almost vertical sun has rarefied during the day. Even at a time when the temperature of mid-day is indicated by from 95° to 100° Fah., the evening sets in delightfully cool and pleasant; the heat which the earth has absorbed is rapidly radiated into space; the mercury falls to about 60° or 65°, and the heated frame, languishing under the intensity of the sun, is cooled and invigorated by the genial current, which, "like a breathing from another world," brings joy on its wings. These winds, or rather breezes, present a strong contrast with the cold, chilling blasts which visit San Francisco at this season, at or near mid-day, and which, being attended by heavy mists from the ocean, occasion a change in the atmosphere by no means agreeable. Here they seldom rise high, and though accompanied with a marked alteration in the atmospherical heat, the change is not abrupt, nor more than sufficient to impart timely vigor to the energies of a population relaxed by the exalted temperature of the preceding day. Sufficient has already been said of the general character of the annual rains, to convey some idea of their leading features. In their prominent characteristics, they do not differ from the account given of them as pertaining to the vicinity of San Francisco.

In this valley they usually commence a little later in the year, say the last of October or first of November, and continue with irregular periods of duration and intermission until April. Sometimes there are occasional showers in October, and not unfrequently they begin upon the receding days

of April. Their approach is always preceded for some time by an increased hygrometric condition of the atmosphere, with southerly winds; and on each recurrence during the season, these winds, though not unerring prognostics, become their most reliable and undeviating heralds.

In the interval between the rains, the weather is cool and pleasant, a fresh northerly wind from the "snowy mountains" diffuses health and an invigorating influence among the inhabitants, and a warm and grateful sun awakes from their slumbers the torpid germs of the vegetable world. In February, the wild oats have covered the fields with a rich mantle of green, and the violet mingles its odors with the balmy breath of March. Close upon the termination of the rainy season the summer begins. The sun at mid-day rapidly attains an almost tropical intensity. The north wind, which before was cool and refreshing, comes to us warm and sultry, while the south wind of evening, "like a gentle friend," renews his welcome visitations.

Materials are not at hand for the construction of statistical tables, showing the changes in respect of temperature during any very considerable period. This is the more to be regretted, as we conceive they would fully establish the positions assumed in the preceding pages. I have, however, been kindly furnished by my partner, Dr. J. F. Morse, with a statistical record for a portion of the year 1852, which suffices to show the thermometrical range and the course of the winds during the period they embrace, and which may be considered a fair criterion by which to construct an estimate for a series of years. The only noticeable difference is in the greater prevalence of southerly winds during the whole day than has at other times been observed.

The following are the tables alluded to; the first relates to the thermometrical changes, and the last to the course, &c., of winds.

*Tables showing the thermometrical range and direction of the winds from July 18th to Oct. 30th, inclusive.*

| JULY. | Max. | Min. | Range. | AUGUST. | Max. | Min. | Range. |
|---|---|---|---|---|---|---|---|
| Sunrise. | 80 | 68 | 12 | Sunrise. | 72 | 66 | 7 |
| 3 P.M. | 92 | 79 | 13 | 3 P.M. | 91 | 70 | 21 |
| Sunset. | 88 | 74 | 14 | Sunset. | 87 | 70 | 17 |

| SEPT. | Max. | Min. | Range. | OCT. | Max. | Min. | Range. |
|---|---|---|---|---|---|---|---|
| Sunrise. | 78 | 60 | 18 | Sunrise. | 67 | 56 | 11 |
| 3 P.M. | 96 | 67 | 29 | 3 P.M. | 79 | 64 | 15 |
| Sunset. | 92 | 70 | 22 | Sunset. | 76 | 61 | 15 |

It is to be regretted that the indications of the thermometer were not given at a later hour in the evening than sunset, inasmuch as the change in temperature is much greater after that hour than between that and 3 P.M. As far as our own observations extend, the height of the mercury is remarkably near the same standard at sunrise, and 10 or 11 o'clock, P.M.

According to these tables, we find the hottest day in the four months, at 3 P.M., was Sept. 11th—96°; next, Sept. 10th and July 24th—92°. The hottest day at sunset was Sept. 11th—92°; next, July 23d and 29th—88°. The coolest day at 3 P.M. was Oct. 14th—79°. The highest monthly range between sunrise and sunset was 10°, in August; the lowest 2° in July. The greatest range during the four months was in Sept.—29°. The mean range for the whole period was 16° 16′.

On the subject of the winds, the observations furnished by Doct. M. substantiate the general remarks above expressed. From these we have arranged a general statement as follows, viz.:

JULY.

Sunrise—Wind S.S.E., E.S.E., or S.W., every day but one.
3 P.M. " S., or S.E., " " " five.
Sunset— " S., E.S.E. or S.W., every day in the month.

AUGUST.

Sunrise—Wind S., E.S.E. or S.W., every day except four.
3 P.M. " S., S.S.E., E.S.E., S.E., or S.W., " five.
Sunset— from some southerly point every day.

SEPTEMBER.

Sunrise—Wind S., S.E., or S.W., every day except nine.
3 P.M. " " " " " " " thirteen.
Sunset " " " " " " " five.

OCTOBER.

Sunrise—Wind S., S.S.E., or S.W., every day except nine.
3 P.M. " " " S.S.W. or S.W. " " " eight.
Sunset— " " " S.E., " " " " " "

During July, August, and October, the wind was northerly on no day during the evening, and in September only one evening. When not southerly it was from the west. It will be observed how uniform the southerly winds prevailed during the evening, and an explanation will be afforded thereby, of the delightfully cool and refreshing atmosphere of that period of the day. As before mentioned, the prevalence of southerly winds during other portions of the day was greater than is usual. In the succeeding summer, the northerly winds were more predominant during the day.

The influence of these winds upon the health of the city we do not regard as a matter requiring a lengthy discussion. At most, it would appear, from all the evidence before us, to be slight. The occasionally injurious effects of the great deviation of temperature noticed between day and night, the checking of the perspiration which ensues, and the consequences resulting from it, have been previously alluded to. Beyond this, their agency in disease is not remarkable.

With these somewhat cursory observations, we shall briefly allude to a few of the diseases most frequently met with on the Sacramento river, and it will readily be understood that, of these, intermittent and remittent fevers constitute a large proportion. Of the two varieties, intermittents largely predominate. In addition, many cases are reported as typhoid fever, some of which are the true petechial typhoid, and others only, such as, originally of a different type, have assumed that form in their progress towards their termination. It will also be seen, that there is no class of diseases more prevalent than those whose seat is in the mu-

cous membranes, particularly that of the large intestines. Of all the maladies which the physician is called upon to treat, there are none more common than those whose primary seat is found in some portion of the intestinal mucous membrane, nor is there any complication of other affections more frequent, and towards which his watchful attention is more earnestly directed. Indeed, few persons come to California, and more especially to the valleys and to the neighborhood of the rivers, without being more or less affected, during their early residence, with diarrhœa. In this city, it is frequently attributed to the use of the river water, by those unaccustomed to it; and though this may possibly be one of its occasional causes, yet it should, with stricter propriety, be ascribed to the universal pre-disposition conferred by the climate to disorder,—to irritation,—hyperæmia of the lining membrane of the intestinal canal and its follicles. The prevalence of these affections in warm countries, induced by the action of the hot sun on the dermoid tissue, has been long noticed, and this cause, with the chilliness of the nights, and perhaps, also, an atmosphere vitiated by malarious emanations, probably furnishes a sufficient explanation. In its associations, it frequently attends the commencement of fever, especially of the ordinary intermittents of the autumnal months, of dysentery, and every stage of remittents. As a primary disease, its character, in the great majority of cases, is mild and tractable.

It is not our intention to enter into a minute account of this or the other diseases commonly met with. A very few words will be devoted to the subject.

According to our own experience, the accession of this complaint is usually attended with more or less derangement of the biliary secretion, the discharges being sometimes highly charged with bile, or, much more frequently, during the latter part of the season, entirely devoid of this principle. They are commonly frequent, thin, and serous, sometimes mucous, and, in the vast majority of cases, unattended with tormina or pain. The tongue is seldom loaded, usually clean, and more or less red. It the latter part of the season,

and in cases of severity, it is often pale and œdematous, or dry and discolored, accompanied with a marked torpidity of the cutaneous secreting vessels, a languid circulation, and the general evidences of extreme debility. The treatment is, of course, modified by the peculiar characters presented, and the stage of the disorder, but consists mainly in the administration of alteratives, opiates, and tonics, combined, if needed, by the more active astringents. A combination of blue mass, morphia, and quinia, will frequently accomplish all the purposes in view. While, in many cases, occurring in debilitated habits, the addition of piperine to the first two of these has seemed to be attended with beneficial effects. The chronic stages of the disease are often extremely obstinate and difficult to relieve. For this condition, a host of expedients may be tried, comprised mostly under the indications already mentioned: a change of air—a temporary removal to the mountains in the interior, or to a marine atmosphere, will here often effect more lasting relief than all the appliances of the materia medica.

The type of the fevers most commonly met with is intermittent, of every variety of feature, but neither these, nor the remittents, present any peculiar characteristics which require special attention in this place. The general principles of their treatment are common to this and other countries, except, indeed, in so far as depends upon the prevailing element of irritation of the intestinal mucous membrane. Attention should constantly be directed to this important feature, and due respect paid to its earliest manifestations. Their frequent complication with cerebral symptoms is promptly and effectively relieved by the timely use of cupping. In our own experience, the long-continued use of mercurials is seldom needed, and ptyalism never. A few initiatory doses as an alterative, or purgative, will fulfil all the indications to which they are applicable, and the subsequent issue of the case may, in most instances, be left to the administration of diaphoretics, quinia, and, if required, to stimulants. Many modifications of this practice will, in dif-

ferent cases, be required, which the judgment of the physician, at the moment, can alone determine.

In concluding this portion of the subject, we will simply add, that the prevalence of diarrhœa and dysentery, in this climate, seems to strengthen the opinion entertained by many, of the connection of these diseases with malarious vitiation of the atmosphere, and tends to confirm the remark of Doct. Forry, that, "compared with the ratios of intermitting and remitting fever, the laws developed in both exhibit a striking analogy." The augmentation of both with the increasing temperature of the season is very evident. Besides these, rheumatic affections are frequently met with, as well also as ophthalmiae, of different characters, but very often, according to our own observation, associated with a rheumatic taint, and implicating the iris in the progress of the inflammation. Of minor affections, there are none more common than the various diseases of the skin,—impetiginous and lichenous,—also, urticaria; erysipelas, too, has been of frequent occurrence in this country, sometimes, in certain localities, assuming an epidemic form. Its progress is rapid, and it has, at times, been marked by great severity. In the State Marine Hospital at San Francisco, 21 cases were reported for the year ending Dec. 31, '53; and in the Stockton Hospital, for the year ending Dec. 31, '52, 10 cases. In this year, it is stated to have prevailed throughout the southern mining counties, with "great virulence and alarming fatality."

For the purpose of more clearly setting forth the relation of the climate to disease, and of facilitating a proper understanding of the subject, we have prepared a series of Tables, an examination of which will not be without interest. It is here proper to state, that the facilities in our possession for the accurate investigation of this important subject, are extremely defective. The information we have been enabled to obtain, has been through the kindness of Mr. Yeomans, the undertaker in this city. Having held this position for a series of years, and being necessarily engaged in the burial of all persons dying within the city, a record of whom he

has constantly kept, whether from the public hospitals or from private circles; the information, thus far, is probably correct. But in the absence of any law requiring the certificate of a physician stating the cause of death, he must necessarily incur the hazard of an occasional error. Under these circumstances, much credit is due to Mr. Yeomans for the unrewarded care bestowed in ascertaining the true causes of death, and the general apparent accuracy with which his registry has been kept. When the probable cause could not satisfactorily be arrived at, he has classed them under the head of "unknown." With this explanation, we believe the statistical collections we have made, will, with one exception hereafter to be mentioned, present a near approximation to the truth. The same explanatory statement will equally apply to the records obtained at San Francisco.

The first of these Tables embraces a full record of the interments in Sacramento for the years 1851, '52 and '53.

*Table of Mortality during three Years.*

| | 1851. | 1852. | 1853. | | 1851. | 1852. | 1853. |
|---|---|---|---|---|---|---|---|
| Diarrhœa and Dysentery, | 60 | 84 | 46 | Still-born, | | | 3 |
| | | 31 | 16 | Abdominal Abscess, | 1 | 1 | |
| Fevers, | 59 | 140 | 63 | Ulceration of Bowels, | 2 | | |
| Phthisis, | 19 | 27 | 22 | Jaundice, | 1 | | 5 |
| Erysipelas, | 15 | 1 | 1 | Croup, | | 1 | |
| Pneumonia, | 13 | | | Dentition, | | 1 | 6 |
| Dropsy, | 7 | 13 | 9 | Cystitis, | | | 1 |
| Enteritis, | 6 | 19 | 16 | Cancrum Oris, | | | 1 |
| Mania a Potu, | 5 | | | Parturition, | | | 1 |
| Infl. and Con. of Brain, | 9 | 27 | 12 | Convulsions, | 1 | | 3 |
| Hydrothorax, | 4 | | | Wounds & Accidents, | 9 | 19 | 7 |
| Disease of the Heart, | 2 | 2 | 4 | Drowned, | 8 | 11 | 11 |
| Bronchitis, | 2 | 9 | | Executed, | 4 | | 3 |
| Ptyalism, | | 1 | | Poisoned, | 1 | | |
| Worms, | | 1 | | Unknown, | 29 | 58 | 27 |
| Disease of Kidneys, | | | 1 | Diseased Lungs, | | 11 | 17 |
| Bilious Colic, | | | 1 | Smallpox, | | 19 | 16 |
| Rheumatism, | 3 | | | Epilepsy, | | 1 | 1 |
| Liver Complaint, | 1 | 3 | 5 | Rubeola, | | 3 | |
| Intem. and Exposure, | 1 | 15 | 8 | Paralysis, | | 1 | |
| Gastritis, | 1 | | | Hip-joint Disease, | | 1 | |
| Debility, | 1 | 7 | 9 | White Swelling, | | 1 | |
| Tonsilitis, | 1 | | | Cholera Morbus, | | 15 | |
| Scorbutus, | 1 | 2 | 1 | Cholera, | | 102 | |
| Spinal Disease, | 1 | | | Burned, | | 6 | |
| Pertussis, | 1 | | | Suicide, | | 8 | 1 |
| Influenza, | 1 | | | Fungus Hematodes, | | | 1 |
| Pleuritis, | 1 | | | Cholera Infantum, | | | 1 |
| | | | | Murder, | | | 4 |

*Ages for* 1852 *and* 1853.

| | 1852. | 1853. | | 1852. | 1853. |
|---|---|---|---|---|---|
| Under 1 Year, | 17 | 18 | From 30 to 40, | 126 | 70 |
| From 1 to 5, | 32 | 23 | " 40 " 50, | 79 | 43 |
| " 5 " 10, | 8 | 4 | 50 and over, | 40 | 24 |
| " 10 " 20, | 21 | 15 | Unknown, | 106 | 49 |
| " 20 " 30, | 214 | 87 | Total, | 643 | 333 |

The whole mortality, as shown by the above, was 1,251. Of these, however, a considerable number cannot be ascribed to the influence of any local causes, and of such, there will be observed the large proportion of 125 arising from intemperance and exposure, murder, executions, and sundry accidents. Besides these quite a large number were of diseases of a purely accidental character, or such as depended upon organic alterations begun in other climates. It is to be remembered that Sacramento is the general rendezvous for the tide of immigration which pours in from the Atlantic States. Whether from the plains or from the ocean steamers, the great mass of adventurers to the land of golden promise repair to this city, bringing with them the seeds of diseases acquired on their route hither, or implanted before leaving home. Destitute, in many instances, of the means necessary for subsistence merely, and unprovided for the emergency of sickness, too many, alas! are thrown upon the cold charity of strangers, and with blasted hopes and an untimely death, help to swell up the lists of mortality.

The estimate here made includes, also, the deaths occurring in the State Hospital, which, during '51 and '52, was located in this city, and thus embraces a large aggregate of cases not properly belonging to the city, and who had contracted their diseases in other portions of the State. The total mortality at this institution, as taken from the books of the undertaker, was two hundred and one, and in 1853, from January to June 30th, when the Hospital closed, it was thirty-nine.

During '53, there died also at the County Hospital, from June 30th to September 1st, five persons; making forty-four to be deducted from the proper city mortality during eight months, and a total aggregate of two hundred and forty-five from the whole mortality of the city from January '52 to September 1st, 1853.

With these considerations kept in view, an examination of this Table furnishes the most convincing evidence of the general salubrity of the climate of Sacramento. When we consider the character of the population, the disregard of all sanitary requisitions among a large class of the community, the dissipation, the apparent contempt for the restraints which a due regard to health imposes, and more than all, the flood of immigration annually centering here, and the wretched condition to which so many of them are reduced, the wonder is, that the annual mortality is not vastly greater than that shown by the record.

The statement of the ages of the deceased during 1852 and '53, is worthy of notice. The large number, between twenty and forty years of age, sufficiently shows the general character of our population, and admits the influence of the youthful vigor and energy which distinguish it.

In comparison with other diseases not strictly ascribable to the climate, the proportion of deaths from disease of the brain is large. Under the heads of inflammation and congestion of this organ and apoplexy, we find that fifty-four are referable to cerebral affections. A ready explanation is offered in the moral causes which are so prevalent in this country. Among these, disappointed hopes, blighted expectations, and pride smarting under the contemplation of golden dreams unrealized, or fortunes acquired, but suddenly vanishing in the vortex of speculation or of gaming, are in ever active operation, powerfully predisposing and exciting both of functional and organic derangements of the brain.

An analysis of the Table would afford an interesting opportunity for a comparison of the record of deaths in this city, with those of other cities on the Atlantic side of North

America. The whole mortality from acute diseases of the chest and respiratory organs, for example, including pneumonia, pleuritis, bronchitis, influenza, and croup, is only twenty-seven. On the other hand, under the head of consumption and diseased lungs, which are supposed to refer to the same disease, we find the comparatively large number of ninety-six.

The relation of the climate of this valley to phthisis is a question, upon the discussion of which we have neither space to enter, nor the materials at hand upon which satisfactorily to construct an argument. The country has but so recently been occupied by its present population, and this is so fluctuating, that statistical records upon this subject are entirely wanting. Certain it is, however, that few of the cases of consumptive disease, hitherto met with in the valley, have originated here. In most, if not all the instances, the disease has been implanted before reaching the country, and the most that can be said, is that it has not been benefited by the change. Our own opinion is that the climate is not a favorable one for the residence of those in whom the manifestations of the disease have appeared. The prevailing constitution of the atmosphere is malarious, and the debilitating influence of this poison upon the vigor of those exposed to its operation, and upon their power of resisting the inroads of this disease, has been simply tested by the experience of the best observers. Moreover, the sudden atmospheric change which occurs in the evening, and the bronchial irritation which is liable to ensue upon the too speedy checking of the cutaneous secretions are not to be lost sight of in this connection.

In the succeeding Table is a statement showing the monthly mortality from all diseases during '52 and '53 :

*Table of Monthly Mortality.*

| | 1852. | 1853. | | 1852. | 1853. |
|---|---|---|---|---|---|
| January, | 22 | 42 | July, | 46 | 14 |
| February, | 21 | 29 | August, | 76 | 23 |
| March, | 24 | 21 | September, | 185 | 29 |
| April, | 18 | 29 | October | 79 | 37 |
| May, | 20 | 20 | November, | 78 | 31 |
| June, | 30 | 18 | December, | 44 | 40 |
| Total 6 ms. | 135 | 159 | Total 6 ms. | 408 | 174 |

It will be seen that in both the years referred to, the mortality was greatest in the last half of the year, viz., from July to December inclusive. In 1853, the excess of the last half over the first was only 85·12, nearly; while in '52 it was equal to three times the whole number of deaths in the same period. This discrepancy in the monthly mortality in the two years is more apparent than real, if we take into account only those diseases which can justly be attributed to the permanent influence of the climate. If from the deaths in the latter half of 1852, we deduct those from cholera and cholera morbus, which were probably the same disease, and none of which are stated to have occurred in '53, and which cannot properly be considered to belong to the ordinary agency of the climate, and at the same time make a proper allowance for the large increase of diarrhœa in that year, which was to be ascribed to the prevailing choleraic influence, the proportion of deaths is but little greater in one year than in the other, only 34. If in addition, we take into account the large increase of deaths classed as "unknown" in that year, the persons, so classified, having been many of them found dead, picked up in the sheds and bushes on the outskirts of the city, and some of whom we have reason to know died of cholera, and also the small, though still frightful, list of those who fell victims to the relentless fire which swept over our city in

November, and classed in the Table as "burned," the uniformity in the mortality of the two years is remarkable.

In computing the pro-rata mortality of the city, a very large allowance is to be made for the floating population constantly present within its precincts. This cannot be less than 3,000 or 4,000, and, if considered in the calculation, must considerably reduce the estimate. It is a fact, universally admitted, we believe, that the actual population of this city,—permanent and transient—has not varied to any very considerable extent, for the last three years. The permanent inhabitants are, probably, more numerous now than at any previous time, but the difference is fully equalized by the greater floating population in '51 and '52. Admitting then the whole population to have been 13,000, the mortality in 1851 was one in 47·27, nearly; in 1852, including cholera and its associates, one in 20·46; in 1853, one in 33·61.

But from this estimate, the mortality from cholera should, according to the view above expressed, be deducted, in judging of the mortality from diseases connected with the climate in its permanent influence, which will reduce the ratio to a nearer equality for the three years.

The third Table which we have prepared, is intended to show the mortality in two years, from the two principal diseases of this locality, viz., fevers and affections of the bowels. The last half of the year is selected, as at that period, these complaints are ordinarily more prevalent than at any other, and the year 1852 is purposely omitted, in consequence of the acknowledged incorrectness of the report, as will be explained. It is thus shown, that the greatest difference was in 1851, while in 1853 it amounted to two only.

| | 1851. \| 1853. | | 1853. \| 1851. | | | 1851. \| 1853. | | 1853. \| 1851. | |
|---|---|---|---|---|---|---|---|---|---|
| | Fevers. | | Diar. & Dys. | | | Fevers. | | Diar. & Dys. | |
| July, | 4 | 3 | 3 | 1 | November, | 9 | 6 | 8 | 5 |
| August, | 2 | 2 | 1 | 1 | December, | 11 | 7 | 11 | 8 |
| September, | 5 | 9 | 7 | 5 | | | | | |
| October, | 5 | 10 | 5 | 3 | Total in 6 m's, | 36 | 37 | 35 | 23 |

With reference to the reported cases of fever in 1852, a word is necessary in explanation. The number reported was

so large, as with the general information we possessed, could scarcely be credited. With the hope of obtaining a solution of the question, we made particular inquiries of Mr. Yeomans, and learned from him, what was before suspected, that a good many of the cases of cholera were in the early period of its prevalence, reported to him, by the attending physicians, as congestive fever. This was done partly with the view of quelling the excited state of the public mind on the subject of cholera, and partly under the theoretical persuasion of the identity of the two diseases. Still, with this admission, the real number of deaths by fever, in that year, exceeded those of either of the other years with which they are associated in the first of the tables.

The small excess of fevers over the diseases with which they have just been contrasted, will appear remarkable when it is considered that there was an extensive inundation in the spring of '53, and the fact goes far to confirm the impression of the slight influence exerted by the floods upon the health of the city.

Upon this subject we shall not, at present, attempt an explanation, awaiting the further collection of statistical facts and the developments of the future. However it may be viewed, the facts which have been presented, and which, we believe, are mainly authentic, demonstrate, in the clearest possible manner, the almost unequalled salubrity of our climate. A careful examination of all the statistical records, —regard being had to the modifying circumstances we have mentioned,—the accidental deaths, and those in no way connected with the locality,—fully and unequivocally establish the proposition of the healthful influence of the climatic elements which prevail.

The cases set down as fever it would be interesting to classify according to their type, as well as their comparative prevalence in particular months; but the record is here greatly defective, rendering it impossible to do more than arrive at an approximation to the truth. Intermittents and remittents are those most commonly met with, of which the greatest mortality in '53, was in September, 7 cases; next October,

6 cases. Of typhoid fever, there are reported four cases in October, the same number in December, two in September, and one in August.

The same remark is applicable to any attempt accurately to classify, according to their monthly mortality, the two diseases, diarrhœa and dysentery. From a careful examination of the reported cases, according to the record of the undertaker, we find that the greatest monthly mortality from dysentery in 1853, was four, in September; while the highest report of diarrhœa in that year was twelve, in December; next January, eleven cases; and the lowest was in June, when there was but one death reported from this disease. The prevalence of cholera in '52 of course caused a very large increase in the mortality of diarrhœa over the other, yet experience positively indicates the preponderance of the former at all times.

The whole mortality in the city during the present year, 1854, from Jan. to March 30th, has been seventy-three. Of these there occurred in Jan. thirty-eight; Feb. seventeen; March (29 days), twenty-one. Eight cases were of fever; six of diarrhœa and dysentery; three of disease of the brain; twenty-one of diseases of the lungs—not clearly specified; three of variola; two of dropsy; six of enteritis; and the remainder of various accidental causes.

The following table is intended to exhibit the mortality of this city as compared with San Francisco, during the last year, 1853.

| Sacramento. | 1853. | 1853. | San Fr'ncisco | Sacramento. | 1853. | 1853. | San Fr'ncisco |
|---|---|---|---|---|---|---|---|
| January, | 43 | 133 | January. | August, | 21 | 100 | August. |
| February, | 29 | 130 | February. | Sept. | 28 | 135 | Sept. |
| March, | 21 | 93 | March. | October, | 37 | 105 | October. |
| April, | 28 | 84 | April. | Nov. | 32 | 129 | Nov. |
| May, | 20 | 99 | May. | Dec. | 41 | 100 | Dec. |
| June, | 18 | 120 | June. | Total, | 333 | 1343 | Total. |
| July, | 15 | 115 | July. | | | | |

The whole mortality of San Francisco, during three and a half years, was as follows:

| | | | | |
|---|---|---|---|---|
| From July, 1850 to July, '51, | - | - | - | 1,475 |
| " " '51 " '52, | - | - | - | 1,005 |
| " " '53 " '53, | - | - | - | 1,575 |
| " " '53 January, '54 (6 months) | - | - | | 620 |
| Total mortality in 3½ years | - | - | - | 4,675 |

In judging of the salubrity of this city, however, a large deduction from the above must be made for those who have gone there with the germs of disease already implanted in the system. Many from neighboring counties, or even from the mines, are annually carried there for the purpose of securing the benefits of hospital treatment and care. Large numbers of immigrants to the country by way of the ocean, also arrive, suffering under maladies contracted on the Isthmus or on shipboard, and, dying in the city, add to the sum of the mortality. If we make due allowance for these, and for those who meet death by accident, and consider the difference in population, which is probably three times larger than that of Sacramento, the contrast in mortality is slighter than would at first appear. Still, making every admission for these modifying circumstances, the comparison seems to show a large percentage in favor of the healthfulness of Sacramento. This latter, as already remarked, is the general resort for the great mass of adventurers coming to California. By whatever route they may have travelled, a very large majority first seek this city as a convenient locality for the perfection of their future plans, and for a mature survey of the prospects before them. This qualifying element in estimating the salubrity of the climate, as well as the remarks relative to hospital patients, applies, therefore, with equal force, to the latter, and reduces the actual climatic diseases much below the amount stated in the records we have consulted.

We derive the following information from the report of the Trustees of the State Marine Hospital to the Legislature.

The whole number of patients admitted in 1852 was

2,283; of these, 1,898 were received on account of the city of San Francisco, and 51 were "pay patients"; these should also be considered as properly citizens. Of the whole number, there died 368; and of these, 296 belonged to the two latter classes of patients. Of the diseases, 52 were of continued, 41 of typhoid, 19 of remittent, 3 of intermittent fever, 45 of cholera, 3 of cholera morbus, 42 of diarrhœa, 34 of dysentery, 10 of phthisis, 11 of pneumonia, 7 of pleuritis; being 264, or nearly 5-8 of the whole. The remainder are classed under the head of "wounds" and sundry occasional diseases.

The comparative monthly mortality of the two cities presents a striking contrast. July, which, in 1853, appears to have been the healthiest month in the year in Sacramento, and which shows a mortality of only 15, exhibits in San Francisco an aggregate of 115 deaths, or nearly eight times as many; June, 6·66 as many; May, five times, and so on; while the fall and winter months, which are the most unhealthy in Sacramento, compare favorably with the same period in San Francisco, after making all proper allowances for the difference in population. The mean monthly mortality for Sacramento is 27·75, and 111·92 in San Francisco.

The limits of this paper preclude the possibility of entering into the diseases and climate of any very extensive portion of the State. Yet we cannot omit to add a few observations concerning the locality of Stockton. This, which is one of the principal cities in the State, is situated in the valley of the San Joaquin, on a slough connecting with the San Joaquin river. As before observed, this valley may be considered, practically, as one with the Sacramento. Their general geographical features are similar, the *lule* lands are abundant, and the existing causes of disease are not unlike. The climate is mild and equable, and during the summer season, from its more secluded position, the atmospheric heat is somewhat greater. According to the report of the physician to the State Hospital located there, the variations of the thermometer are slight. It is stated that the coldest morn-

ing in the year (1853) was December 31st, thermometer 28°; the coldest noon, Dec. 26th, thermometer 43°; the coldest night, Dec. 25th, thermometer 34°; the warmest morning was June 16th, thermometer 83°; the warmest noon, June 16, thermometer 100°; the warmest evening, June 15, thermometer 83°. The prevailing winds during the dry season are N.W.; during the rainy season, southerly.

The whole number admitted into the Hospital from Aug. 7th, 1851, to July 1, 1853, was 1,870, of whom only 87 are stated to have died. Of the whole number admitted, 515 were sick of fever, viz.: intermittent, 284; remittent, 90; continued, 15; congestive, 6; typhoid, 80; Panama, 40;—of whom 20 died. One hundred and forty-nine were cases of dysentery and diarrhœa, in the proportion of 86 of the former to 63 of the latter. Of diseases of the chest, there were 10 of bronchitis; 40 of pneumonia; 10 of pleuritis; 1 of gangrene of lungs; 5 of asthma; 11 of phthisis; 7 of influenza. Rheumatism of various kinds numbered 52 cases; ophthalmia, 20; hepatitis, 16; cholera and cholera morbus, 49; skin, diseases of, 40; venereal affections, 172; the remainder comprising a few cases of various incidental affections. It is remarked that there are no cases which the physician is called upon to treat, as unpleasant and unmanageable as the chronic diarrhœas and dysenteries which present themselves. The resemblance of disease in the two valleys is so striking, that it is unnecessary to repeat what has been before said when considering the valley of the Sacramento.

It would be interesting to subject to analysis the report of the physician to the Insane Asylum at Stockton, and examine the details of a malady whose inroads in this State have been fearfully, frightfully manifested,—whose march during the last four years has been, not "aequo pede," but in a quadruplicate ratio. What a field for serious contemplation is here opened! What a commentary it suggests upon the moral influences which affect the population! How violent the passions, wrestling with disappointment and de-

spair! How terrible the struggle which destroys the balance and desolates the integrity of mind!

The whole number of patients admitted from May 14, 1852, to Dec. 31, 1853, was 284. In no State in the Union are the incentives to this disease more prevalent; nowhere are its exciting causes more actively displayed. The thirst for wealth,—the strife for power,—the intricacies and perplexities of speculation,—the wounds, the secret struggles of pride,—the capriciousness of fortune,—the constant excitement, the feverish tension of the intellect they occasion, and, last of all, and with the crumbling overthrow of all, the agonies of despair,—these are but the outlines of that picture in whose finely-wrought lineaments are to be traced the potent causes of insanity existing in this State. But we cannot pursue this subject in its interesting details. It is one which in itself embraces a wider compass than our limits allow.

We have thus hastily, and with the feeble aids in our possession, imperfectly sketched some of the more striking features of the climate of a portion of California,—a limited portion indeed, yet one in which, by its geographical position, its commercial and agricultural importance, and as the locality of its largest cities, there seemed to centre the greatest interest. It is a source of sincere regret that the statistical information could not have been more extensive, and embrace a wider range of topics, as well as of territory, and especially that the means of obtaining such information should in any respect be involved in doubt. In their collection, we have endeavored to separate the uncertain from the true, and wherever the circumstances were such as to involve a want of precision, we have sufficiently expressed it. In the main, we believe they will be found to convey a pretty correct estimate of the actual sanatary condition of those portions of the State they are intended to embrace. A consideration of the climate of other parts of the country, and especially of the mining regions, and the diseases which prevail, may form the subject of future contemplation.

The medical constitution of the climate of California is yet in its forming state. With the progress of cultivation, of civilization, and the changes in the social condition, new elements and combinations of elements will arise to modify the character of the diseases, to bring about the development of new creations, and the manifestation of those consequences which even now, perhaps, are silently germinating under elemental influences whose agency is not yet recognized. The actual pathologic or therapeutic influences of the climate, it is difficult to determine in a state of society so constantly changing; where exposure to its influence is so seldom permanent, or where, as yet at least, it has been of so short duration. Time and the revolutions which keep pace with it, a more settled state of society, the results of observations extended through a long series of years, and having reference to the permanent population, will alone determine a subject of so much interest.

*Sacramento, April 1st*, 1854.

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ART II.—*A Case of Amputation at the Shoulder-Joint.* By JOHN COCHRAN, M.D., One of the Surgeons to Brooklyn City Hospital.

AT three, A.M., November 12th, 1853, I was called to see Mr. Charles Phillips, a young gentleman of South Brooklyn, who had reached home an hour previously, seriously wounded by the accidental discharge of a gun. I found him lying on a lounge, exhausted, and almost bloodless. The following is the history of the accident, as given me:

He had been out in Pennsylvania, deer-shooting, in company with some friends. At three, P.M., of the 11th, while resting from fatigue on a log, with the gun across his breast, the dog interfered with the trigger, which caused the discharge of the piece, the contents of which passed through the left arm, close to the shoulder. Binding the arm to the body with some tape, he travelled two miles on foot, five in a country wagon without springs, over a rough road, and thence

one hundred and forty-five miles by railway to the terminus at Jersey City; from there, by carriage, to his residence in South Brooklyn; making in all a distance of about one hundred and fifty-five miles, the wound all this time being undressed, and oozing constantly.

Cutting open the sleeve of the coat and shirt, the wound was exposed. On the inner side of the arm, at the insertion of the pectoralis major muscle, there was a wound of the size of a dollar. On the outer side, opposite to the first, there was a long, ragged slit, extending from within two inches of the acromion to the juncture of the middle with the lower third of the arm.

The os brachii was shattered into fragments from its surgical neck to the middle of the bone, leaving a spicula of bone attached to the head. The external wound of the soft parts was owing to a considerable portion of bone being carried longitudinally through with the shot. The axillary artery was dissected out, and visible for two inches of its course, but untouched; the parts adjoining were considerably discolored and burnt with the powder.

Having carefully examined the condition of the parts, I communicated to him at once the necessity for the speedy removal of the arm at the shoulder-joint. Without a moment's hesitation, he assented by directing me to proceed. I explained to him that, in his present state of exhaustion, a little rest would be necessary before subjecting him to another and greater shock. Filling up the wounds with sponges, and applying a roller, moderately tight, from the fingers to the shoulder, and giving, at the same time, directions for the free use of broth and brandy, with perfect quietness, I took my leave, to return by daylight.

At nine o'clock, A.M., in consultation with my friends, Drs. Hunt and Ayres, it was decided to remove the arm at the shoulder-joint, although at first it was supposed we might possibly succeed in saving the head of the bone, with a view to the gentleman's appearance. But, on close inspection, the soft parts immediately around the capsular ligament were

found to be ragged and burnt. This rendered any such attempt worse than useless, as we must necessarily incur the risk of extensive suppuration and a second operation.

The patient was placed upon the table, and the chloroform administered. The operation was begun with an ordinary scalpel, by carrying an incision from the posterior border of the acromion directly downwards to the upper angle of the external wound, thence across the front of the arm to the internal wound, dissecting up the parts in front of the joint. (In this way a small portion of flap was obtained.) The long head of the biceps and capsular ligament were next divided, and the head of the bone raised from the glenoid cavity. Liston's knife was then carried under the disarticulated bone; and by a single traction downwards, a long flap was made from the comparatively sound tissues behind.

There was no compression resorted to in the dissection in front of the joint; but it was necessary to stop and secure the acromial artery, which bled very freely for a moment. In making the posterior flap, Dr. Ayres followed the knife so closely with his hand, securing the artery and compressing the veins, that scarcely a tablespoonful of blood was lost. Besides the axillary, some nine or ten small vessels required the ligature. Between the twelfth and fifteenth days, all the ligatures came away, with the exception of that upon the main vessel, which parted on the twenty-second day after the operation. In five weeks the cure was complete, without the occurrence of any unfavorable symptoms. His general health at the present is as good as at any previous period of his life.

BROOKLYN, *February 16th*, 1854.

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ART. III.—*Observations on Exhaustion from the Effects of Heat.* (*Coup de Soleil*). By H. S. SWIFT, M.D., Resident Physician of the New-York Hospital.

OWING to the oppressive and long-continued hot weather of the past summer, an unusually large number of cases were admitted to the New-York Hospital of what is

called *coup de soleil*, or, as now regarded by the profession, extreme prostration produced by exposure to excessive heats, combined, perhaps, with the effect of receiving large draughts of cold water into the system, when overheated.

So prevalent, indeed, was this disease, that at one time it was regarded almost as an epidemic, not only in this, but in neighboring cities. Several cases occurred in the country, where, heretofore, it has seldom appeared. It will be recollected that a large per cent. of the cases were fatal. The report of the City Inspector of this city alone shows 260 deaths from *coup de soleil*, without including many cases designated as "congestion of the brain" and the "effects of cold water."

It is now only five or six years since the nature of this disease was pointed out, and yet the profession, generally, have but vague and indefinite ideas respecting it, and it is a matter of surprise that medical literature is so deficient on this subject. A few short monographs, and a few reported cures, are all that can be found in regard to it. Cases are not so infrequent, nor is this affection so devoid of interest, as this silence would seem to indicate.

I have no new theories to propose, or any new light to throw upon the pathology or the treatment of this disease; the object of this paper is simply to call the attention of the profession to this subject, more especially as the season is now approaching in which we may reasonably expect a return of this "calamity."

The term *coup de soleil* as applied to this disease, is a misnomer. It is a popular rather than a professional appellation. All our authors agree that "cerebral apoplexy" is occasionally produced by exposure to the direct rays of the sun. This I regard as true *coup de soleil*. The subject now under consideration is an entirely distinct affection. It is now almost universally admitted to be mere nervous exhaustion produced by protracted and violent exercise in an over-heated atmosphere.

Of the large number of cases observed by me, none were

strictly apoplectic, and no lesions were noticed in those which proved fatal, sufficient to account for death. Those two opposite conditions—the "cerebral congestion" and "nervous debility"—require opposite modes of treatment, and should be carefully distinguished from each other.

The subjects of this affection are usually laborers who have been exposed several hours during the day to the direct rays of the sun, the thermometer being over 90°. A great majority of the following cases were foreigners, many of whom had but recently arrived in this country, and who, after the deprivations of a long passage, were ill-adapted to endure great fatigue in so high an elevation of temperature.

The same condition may result after exposure to artificial as well as solar heat. Eleven patients were attacked one morning in the laundry of one of our principal hotels; several were brought to us from a sugar refinery, where, after working several hours in a close and over-heated apartment, they fell down suddenly in a state of insensibility; and we had an opportunity of comparing their symptoms and lesions with those who became exhausted after laboring in the sun, but were unable to satisfy ourselves of any distinction.

Whatever tends to enfeeble the vital powers must be regarded as the predisposing cause. This may result from muscular debility or preëxisting disease. Heat acts as the exciting cause. One patient had suffered for several weeks from an obstinate diarrhœa. He had eaten nothing on the morning of the attack, and, after imprudently walking only a short distance in the sun, fell down insensible. Another patient was suffering at the time of the attack, as we afterwards learned, from the usual *malaise* of fever, and after convalescing from this disease, passed through the ordinary attack of petechial typhus. Still another was in a cachectic condition from the influence of malaria. He was also picked up in the street, and brought to hospital in an insensible condition. These cases were not included in our Report, though they were evidently suffering from this disease at the time of their admission to the hospital.

An attempt has been made to distinguish those cases which are the result of exhaustion merely, and those who have been suddenly seized after drinking large draughts of cold water when over-heated either from exposure to the sun or by violent exercise. If such a distinction exists, by far the greater number of cases which fell under my observation would be included in the latter class, though only in a single instance were we able to trace any *immediate* connection. A seaman had been employed, during the day, in the rigging of a vessel, exposed to the direct rays of the sun. At 3 P. M., he complained of a severe pain in the head and a "sense of sinking within him." After drinking very freely from a bucket of hydrant-water, he plunged his head into it, and immediately fell down insensible. Most of the patients had been drinking water freely during the day,—some moderately,—while others had scrupulously avoided it. But a large majority of them were attacked immediately after dinner, when probably large draughts of water were employed.

For this reason I am inclined to believe that the effect of the cold water in these cases is merely to hasten the development of the disease, and that a majority of the cases reported as deaths from "drinking cold water," are really occasioned by "solar exhaustion." Nearly all the patients were exhausted by severe labor, and at their dinner they were in just the condition to suffer from the shock of receiving a large quantity of water suddenly into the system.

Deaths from the effects of cold water are not so frequently met with as is generally supposed. Dr. Dickson, of Charleston, S. C., says: "I have never seen a death from drinking cold water, nor have I been able to obtain any authentic account of such an event having occurred since I have been engaged in the practice of medicine in this city. Yet here, if anywhere, such accidents should occur. Immense quantities of ice and iced fluids are daily consumed here by persons subjected to the several conditions which are regarded as calculated to favor the morbid influence of the agent in the highest degree. The cases described by Rush I believe

to have been generally cases of insolation, and that, being sensible of rapidly approaching disease, and at the same time feeling an internal heat, the patients were just procuring relief when overtaken by sudden death." Such, undoubtedly, was the case of the sailor above referred to.

The disease is usually stated to be confined to patients of irregular habits; but only a small proportion—at least less than one-half of the following cases—could be regarded as intemperate, and many of these had restricted themselves during the day to a single glass of ale or brandy.

The premonitory symptoms are usually slight, and of short duration. A laborer may, perhaps, have been employed until a late hour the previous night, and the next morning complains of a slight headache and a general feeling of languor. He takes his breakfast with less relish than usual, but resumes his ordinary duties. But, in the great majority of cases, even these slight symptoms are wanting. They are suddenly seized, while in the performance of their labors, with pain in the head, and a sense of fulness and oppression in the epigastrium, occasionally nausea and vomiting, general feeling of weakness, especially of the lower extremities, vertigo, dimness of vision, and insensibility. Surrounding objects appear of uniform color. In a great majority of cases, this was, so far as could be ascertained, blue or purple. In one instance, everything appeared red; in another, green; and in another, white. One stated that objects retained their natural color, but expressed them as being very beautiful, while to another everything appeared greatly magnified.

This may be regarded as the first stage of the disease. It is usually of short duration. In the milder forms of the disease, the stupor is only momentary. The patient is at first, perhaps, aroused with difficulty, but he gradually regains his consciousness. If, however, the attack is severe, the patient shortly passes into a state of coma. The skin is hot and pungent to the touch, and by actual experiment, according to the observations of Dr. Dowler, the temperature is elevated to 112° Fahr. The pupils are dilated and insensible

to light; the breathing hurried and labored; the pulse is sometimes slow and full—sometimes frequent and feeble, though the action of the heart may continue inordinately strong up to the last moment of life.

In the third stage, the symptoms are those of collapse. The pulse becomes more frequent and feeble; the respiration, which at first was hurried and labored, now becomes stertorous, and accompanied with sighing and moaning; the skin cool, or the surface of the body may retain its natural temperature, though the head may be hot; the sphincters become relaxed; extremities cold; the countenance swollen and livid; the pupils may be dilated, but are often firmly contracted; tracheal râles appear; either the patient is quiet, as if completely paralyzed, or else convulsions, often violent in character, supervene, and he dies suddenly, or he may remain in this condition for several hours.

The first stage corresponds very nearly to that condition described by Southern writers as "solar exhaustion." Dr. Dowler makes a distinction between this "solar exhaustion" (the *coup de soleil* of northern latitudes) and what he calls "solar asphyxia." The former he regards as "a mere fainting, in which the face is pale, skin cool, or not above the natural standard, while, in the latter, the skin is burning hot, face flushed, and the mind and body are utterly insensible to impressions." It runs its course rapidly, and often proves fatal in 30 minutes. Dr. Cartwright says, the cases of "asphyxia are often incurable from falling into an *incurable* state before medical aid can be obtained"! while those of exhaustion simply, if properly treated, will yield as readily as a case of common intermittent, and almost as fatal as "solar asphyxia" if improperly treated.

The second and third stages, described in the progress of the disease, are so intimately connected that it may seem an unnecessary division; but it is more convenient to regard them separately. They differ usually in the mode of attack, and for this reason some have regarded them as a distinct condition. The stage of collapse is most frequently noticed

in those who are seized late in the afternoon, "without the signs of apoplexy," after exposure to the heat and fatigue of the day. But the same condition may occur in those who have been seized suddenly "with the signs of apoplexy," and yet pathologically there *may* be no difference.

Of 60 cases which came under my observation during the past year, 44 were insensible at the time of admission, and 16 were either stupid or sensible. The pupils were dilated in 30, contracted in 19, and natural in 11. The temperature of the body was hot in 34, warm or natural in 14, and cool in 12; while that of the head was elevated in 31, warm in 11, and cool in 18.

The respiration was hurried in 44; the pulse was uniformly accelerated, varying from 100 to 160, and even more per minute. Convulsions were present in 24, delirium was noticed in only a few. 52 of the patients were males. The average duration of the fatal cases was about 4 hours.

The time of the at'ck in 3 cases was between 8 and 11 A.M.
" " " " " "40 " " " 11 A.M. and 4 P.M.
" " " " " "17 " " " 4 and 9 P.M.

Convalescence is usually speedy, after the severity of the disease has passed, and reaction is fully established, varying from a few minutes to five or six hours; the patient sinks into a deep slumber, and awakes somewhat exhausted, and the cerebral functions disturbed; but this soon disappears. Two patients only complained of severe pain in the head, and at intervals exhibited great forgetfulness for nearly a week; and one was occasionally delirious.

A case was reported to me in which delirium supervened, resembling that of delirium tremens. I can conceive that such a condition may exist, but this patient was intemperate, and had been drinking to excess previous to the attack.

Dr. Pepper reports 20 cases, 10 of which died, and 3 resulted in insanity. This termination was not noticed in over 100 cases received at the New-York Hospital. In the reports of lunatic asylums, however, few cases of insanity are

referable to an attack of *coup de soliel.* One patient was delirious, and with the greatest difficulty restrained.

The statistical reports are too inaccurate to furnish any satisfactory data for the mortality of this disease, as no attempt has been made in the reports to distinguish it from "cerebral apoplexy"; but this latter class is, I believe, less frequently met with than was formerly supposed; and that *their* number will somewhat diminish as the facilities for *post-mortem* examination are furnished, and that by far the greater number of cases included under the head of *coup de soleil* are nothing more than "nervous prostration." About one-half of the cases are usually fatal. The mortality of the past year will, however, be above this estimate.

The total number of cases admitted to this Hospital since 1845, is 150, of which 78 died. The mortality of the cases admitted in 1853 is 33 in 67.

The mortality of hospital practice must be greater than that in private, as very many were admitted in a moribund condition, and died before any treatment could be adopted, while others were rendered hopeless by being brought a long distance, several hours after the attack.

The prognosis will depend on the stage of the disease. In the first stage, the prognosis is usually favorable; much, however, will depend upon the treatment adopted. The symptoms indicating collapse are always unfavorable.

In 33 fatal cases, the pupils were contracted in 20, moderately dilated in 7, and markedly so in 6; while, in the successful ones, the pupils were dilated in 19, and nearly natural in 15. No case recovered in which the pupils were contracted. Mere stertorous breathing is not necessarily fatal; but after the respiration becomes *sighing* and *moaning*, the prognosis is very unfavorable; only two patients recovered after this character of the breathing was present.

To these two symptoms—the condition of the pupil and the character of the respiration—I attach much value; and if other observations shall confirm this, they will furnish the most reliable basis for prognosis.

The respiration was sighing or moaning in 31 of the 33 fatal cases; convulsions were noticed in 24. This is a grave symptom, but 6 recovered after they were present. The pulse alone is no safe criterion of the actual condition of the patient, for it may continue of fair strength throughout the whole course of the disease, with no perceptible alteration either in force or frequency, though the patient may be under the free use of stimulants. This will frequently surprise those who are unaccustomed to observe it.

A fatal relapse occurred in one instance. This patient was attacked suddenly while at his work, and lost all consciousness. As soon as he had sufficiently recovered, he walked a long distance to the Hospital, exposed to the direct influence of the sun. This exertion, combined with his previous prostrated condition, probably induced another attack. He again partially convalesced, but immediately sank into a comatose condition, from which he did not rally.

The pathology of this disease is uncertain. We have as yet failed to discover any satisfactory lesion to account for the phenomena noticed before death. It is now, however, generally admitted to be merely "exhaustion" produced by fatigue—either in the sun, or, less frequently, in a close and over-heated apartment.

The post-mortem appearances, though of a negative character, are precisely opposite those found in "congestion" of the brain or apoplexy produced by insolation—in other words, *coup de soleil*. And it is of great importance that this relation should be correctly understood, for they obviously require an opposite course of treatment. Unfortunately these two conditions are too indiscriminately called *coup de soleil*. Our nomenclature, in this respect, is imperfect, and calculated to mislead those who are unaccustomed to observe it. But we must not infer, simply because a disease has been erroneously called *coup de soleil*, that we have apoplexy to contend with. "It is debility we have to meet, and not repletion." Depletion, which is essential in the one, is almost necessarily fatal in the other.

In some cases we have apoplectic symptoms with those which properly belong to the opposite condition. And we may perhaps be puzzled to know to which class they belong. But even in these cases, we rarely find any lesion. Sometimes there will be found a moderate congestion of the brain, but no more so than we often find in cases where we suspect no lesion of that organ.

The following case may perhaps be interesting, as illustrating this:

An unknown woman was picked up in the street in a state of exhaustion, and brought to the Hospital at 8 P.M., Aug. 14th. Nothing could be learned of her previous history. She was completely insensible, pulse frequent (120) and feeble; respiration hurried and labored; skin burning hot; temperature of head elevated; pupils contracted and insensible. The prognosis was unfavorable. Our ordinary treatment was adopted. Sinapisms were applied to the calves of the legs and abdomen, ice to the head. Stimulating enema of spts. tereb., brandy, and tr. capsici were administered moderately. Frictions with mustard were also ordered. Four hours after her admission, her condition became decidedly worse. The slight convulsive movements of the body, which were noticed at the time of her admission, were more marked and violent, and it was only with the greatest difficulty that she could be confined to the bed. The breathing was exceedingly labored, and accompanied with sighing and moaning—pupils dilated; the pulse very frequent, and scarcely perceptible at the wrist; the countenance swollen and livid; extremities cold; the stomach refused to retain the stimulants. The bronchial tubes became clogged with an increase secretion of muocus; and deglutition was very difficult. The slightest attempt to swallow threatened almost immediate asphyxia. She was ordered injections of brandy and carb. ammonia.

On the following morning reaction, was fully established. The pulse 130, but fair strength. The head and surface of the body hot; eyes suffused, red and injected, fixed and

motionless; pupils contracted to a point and inactive; face flushed; countenance swollen and turgid; respiration deep and stertorous; and the patient was completely comatosed. The quantity of stimulants was diminished, and an aloetic enema repeated; ice reapplied to the head, and sinapisms to extremities.

The physician in attendance now regarded these symptoms sufficiently indicative of cerebral congestion to warrant depletion. Ordered a moderate abstraction of blood from the temples by cupping, and the treatment adopted during his absence to be continued. She died 21 hours after admission.

Autopsy 18 hours after death. No marked congestion of the brain or lungs was observed. The heart was flaccid and *filled* with fluid blood. The liver was much congested —other organs healthy.

This case was, doubtless, one of "nervous exhaustion"—a condition so often mistaken for, and associated with, "cerebral apoplexy," and it was the only one in which reaction ran sufficiently high to indicate depletion. But even in this the post-mortem disappointed us. I have only seen a few, a very few cases, of insolation verified by a post-mortem examination,—certainly not *one* during the past year, although examinations were made in *all the cases* in which we suspected any cerebral lesion.

The diagnosis of those cases, which simulate apoplexy is often difficult. The remarks of Dr. Condie, though inapplicable to the case just given, may perhaps be generally useful. He says: "In those cases requiring depletion, the head particularly, and often the entire surface of the body, is hot. The eyes injected; pupils contracted; pulse small, quick, and corded. Tongue red and dry. Patients are delirious, restless, and in a constant state of agitation; and if not speedily relieved by prompt and active treatment, coma ensues, and the patient dies as in acute meningitis."

The true pathology of this disease, like those cases of death produced by lightning, will probably never be correctly explained, unless, perhaps, the microscope may aid in

removing the veil of mystery which surrounds it. But it must be remarked *en passant*, that there are many points of resemblance in the appearance of those who have died from the effects of heat, and the cases reported of death from lightning.

Does the heat produce death by destroying the "vital principle," as Hunter supposed was the effect of lightning? Does it produce some chemical change in the blood itself, so that it can no longer subserve the purposes of innervation? or does it produce its effect primarily upon the nervous system? This is the most plausible theory. The vital powers, already enfeebled by fatigue and the heat of the atmosphere, are unduly stimulated. The natural balance of the circulation is destroyed, and the heart contracts with a "morbid activity." The lungs are engorged with blood, and the heart labors to overcome the increased obstacle, until at length it is exhausted by this "morbid activity," and passive congestion takes place in the capillaries throughout the body.

The pathology of this disease is too obscure and uncertain, and observation too limited, to arrive at any satisfactory conclusions in regard to the *treatment*. It is at best empirical. We regard the disease as one of debility, and we partially treat it as such.

The great practical point to be regarded in the treatment is, that this affection is entirely distinct from *coup de soleil*, as generally understood by the term. It is a disease of "debility," and not one of "repletion." Depletion is generally contra-indicated, and stimulants are usually required.

In cases of *Insolation*, the lance is often employed. But these are very rare. During the summer of 1818, there were 13 cases admitted into the Hospital. These were largely bled; 60 ounces were taken from the arm by repeated bleedings; and in one case as many as 80 ounces. And the "recovery in this one was much more marked and speedy." Three of these died, and the post-mortem appearances were precisely those of "cerebral congestion." But in cases of *exhaustion*, I have never seen *a patient recover* after he had been bled.

This practice is now nearly abandoned. Formerly, nearly every case treated before admission to the Hospital had been bled. But not a *single patient* had been bled of those admitted during the past summer. They do not bear well even the local abstraction of blood by cupping.

The plan of treatment usually adopted is to place the patient in a hot bath, rendered stimulating perhaps by mustard or capsicum—or counter-irritation to the whole body by means of mustard; a stimulating enema of tr. aloes c., or, what is preferable, spts. terebinth; ice to the head *when the temperature is elevated;* brandy and tr. capsici, or even carb. ammonia if required.

The indiscriminate use of *cold affusions* is productive of harm. Injurious and often fatal effects result from them. It is a popular and erroneous idea that a patient, as soon as he is attacked, should be completely deluged with cold water. To employ it in every case would be as absurd as in cases of collapse from any cause.

Another important consideration in the treatment of the earlier stages is *rest.* In crowded cities, to which this disease is mostly confined, this caution is too much disregarded. As soon as a patient is attacked, he should be placed in a horizontal position, in as cool a place as possible, and perfect rest required. Nothing can be more serious for a patient in this condition, to be carried, as is too often the case, upon an ordinary cart for a long distance, or allowed to remain exposed to the influence of the sun.

The length of this paper will prevent any detailed account of the cases themselves. They were admitted during the attendance of Drs. Joseph M. Smith and H. D. Bulkley, and the treatment adopted during their absence was approved of by them. In conclusion, I desire to express my special acknowledgments to my senior assistant, Dr. John B. Chapin, for his valuable assistance, not only on this, but other occasions.

NEW YORK HOSPITAL, *March 15th*, 1854.

ART. IV.—*On the Use of Hydrochlorate of Ammonia in Coup de Soleil.* By J. R. LEAMING, M.D., Physician to the Northern Dispensary, N. Y.

CASE 1.—I was called in the afternoon of June 16th, 1852, to see a man at the Knickerbocker stables, on Eighth avenue, overpowered by heat. He was insensible, breathing somewhat sterterous, pulse slow and weak. Having used muriate of ammonia in the comatose condition of typhus fever with apparent benefit, and believing the nervous prostration in this case to be very similar, I prescribed it in about 8 grain doses in solution, every half hour. He was removed to his home and mustard applied to the epigastrium. With some difficulty he was made to swallow the medicine, but in about 15 minutes after the first dose the stertor ceased. In an hour he was sleeping quietly, and when disturbed, answered questions incoherently. In about three hours, he could sit up in bed and converse, but complained of great lassitude and fullness about the head. The next day he was able to walk out.

CASE 2.—I was called in the afternoon of June 22d, 1853, to see a blacksmith who had been sent to his home in 28th street, overpowered by heat. I found him entirely unconscious, without any action of the voluntary muscles, deep stertor, pulse slow and full.

I gave him the ammonia and applied mustard. I left him, but returned in an hour and a half, and was surprised to find the patient sitting up, able to converse. He complained of general lassitude and a dull pain in the head. The next day he was walking about.

CASE 3.—I was called in the evening of June 28th, 1853, to see a bricklayer, who had fallen insensible a moment after returning home from his work in the evening. I found him without stertor, but breathing slow and heavily, pulse slow and weak, entirely unconscious. I gave him the ammonia and applied mustard, then sent a messenger for Dr. Tucker, his family physician. In about an hour the Dr. called on me, and requested me to see the patient with him. We found him able to converse, complaining of debility and pain in

the head. The medicine was continued, and the patient walked out the next day.

Dr. T. assures me that he has since used the muriate of ammonia, in similar cases, with gratifying success.

Case 4.—August 12, 1853. I was called in the afternoon to see a man, in 26th street, suffering from sun-stroke. Mustard had been well applied before I arrived. He was entirely unconscious, labored breathing, pulse weak and frequent. I gave him the ammonia, and when I returned, in about an hour, he was sitting up.

My notes of these cases are very meagre, but the impression left on my mind at the time, and by other cases of which I have no notes, is, that the ammonia produced speedy and satisfactory relief. If the pathological condition of sun-stroke be excessive nervous exhaustion, as I believe it is, diffusible stimulants are indicated, and I think the muriate of ammonia is the best. The patient should not be bled, ice should not be applied and continued to the head. The face and temples may be sprinkled, or sponged with cold water. Mustard should be thoroughly applied, the extremities kept warm, and muriate of ammonia dissolved in cinnamon water, given at short intervals till consciousness is restored, and afterwards at longer intervals, till the sensation of pain and fullness in the head has disappeared.

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Art. V.—*A Review of Epidemic Small-pox as it has prevailed in New York City at different periods during the last fifty years.* (Read before the Society of Statistical Medicine, New York.) By J. Lewis Smith, M.D, Physician to the North Western Dispensary, New York.

In May, 1801, Dr. Jenner, whose wonderful discovery of the prophylactic power of cow-pox was at the time riveting the attention and gaining the favor of the whole medical world, wrote thus in reference to vaccination: "It is now too manifest to admit of controversy, that the annihilation of small-pox—the most dreadful scourge of the human race—will be

the final result of this practice." More than half a century has passed since this pleasing prediction was uttered, and are we yet nearer its fulfilment? The bills of mortality of this city show, instead of a diminution, a gradual increase of small-pox; yet all our physicians are advocates and practicers of vaccination, and the poor may receive this blessing gratuitously by application at the dispensaries.

This increase of the variolous disease, so contrary to the reasonable expectations of the friends of vaccination, and especially the fact, that we are now witnessing the decline of the most fearful small-pox epidemic which has yet visited our Island, have induced me to prepare this paper. I trust I shall not encroach on the ground already occupied by Dr. Hutchinson, in his interesting and practical communication to the May number of this Journal.

Prior to the present century, small-pox seems to have held an unimportant place among the diseases of New York. It caused, however, an adjournment of the Legislature in 1730, then in session here (*Webster's Hist. of Epidemics*), and no doubt it visited the city, in a sporadic form, almost annually, prior to the period of the registration of deaths. Bills of mortality were first prepared and published in 1805, and our remarks must therefore be based on data furnished since then.

In the decade, commencing with the year 1805, there were in this city 413 deaths from small-pox, or 1·9 per hundred deaths from all causes. In the following decade, from 1815 to 1824 inclusive, the number was 718, or 2·2 per hundred; in the following ten years, closing with the year 1834, they numbered 1103 or 1·9 per hundred; in the next period, from 1825 to 1844 inclusive, 1606 or 2·2 per hundred, and in the following nine years, ending with 1853, 3280 or 2·5 per hundred. From this we see that the per centage of small-pox deaths, instead of diminishing, increases, and that the ratio of increase has been uniform during the last three decennial periods. The second decade shows a large proportion of small-pox deaths, in consequence of its embracing the year

1824, when a very severe epidemic of this disease prevailed. This increase in the fatality of variola is the more note-worthy, because in every European city, so far as we have statistics, there is a gradual diminution of variolous deaths. In London, Edinburgh, Cork, Limerick, Paris, Berlin, and Copenhagen, statistics show a gradual but decided abatement in the fatality of this disease. Whether in the other American cities, as well as in New York, this epidemic is increasing, or, as in the transatlantic cities, is subsiding, is an interesting point, but one which I have not sufficiently examined.

Except in the years 1819, '20, '21 and '22, when there was a long immunity from variola, at least of a fatal nature, the records of every year since 1805 show more or fewer deaths from this disease, and every month since 1847 has had at least ten. Nosologists regard it a law of epidemic diseases, that they prove most fatal after periods of comparative immunity from them. Our statistics show this to have been true of small-pox. Thus in 1811 there were 117 deaths succeeding 4 in 1810, and the years 1813 and '14, '19 to '23, '29, '33, '39, '44 and '47, all showing comparatively few interments from small-pox, were immediately followed by years of unusual mortality from this cause.

During the first quarter of the present century, yellow fever occurred at times epidemically in this city, and since its last visitation, about the year 1823, small-pox, scarlatina, and measles have augmented in frequency and severity. Prof. J. M. Smith, of this city, in an able and highly interesting report, made to the American Med. Association in 1848, in alluding to this fact, ventures the opinion that these diseases require, for their development, different climatic or atmospheric conditions from yellow fever, and that as long as the former are of frequent occurrence we need not fear the visitation of the latter.

It is a matter of some importance to determine the correctness of this view; for, if true, there is less need of imposing quarantine restrictions on vessels coming from ports where yellow fever prevails. Much light might be thrown

on this point by examining the statistics of mortality in southern cities. Are these cities, which are yearly scourged by epidemics of the fever, lightly or severely visited by the three eruptive diseases? From the statistics which I have seen, I am inclined to think that these diseases, though by no means of rare occurrence, prevail less south than north, and that they prevail principally in the months when the fever is absent. Dr. Gregory remarks (*Lect. on the Erup. Fev.*) "It is seldom that two diseases are epidemic at the same time in the same district." This is no doubt true of certain of the epidemic diseases, but small-pox, scarlatina, and measles are an exception. The Inspectors' reports show not only that the annual mortality of all three has gradually increased, and in about the same ratio, but also that two, or indeed all of them, may occur as epidemics during the same month. This comports with the fact, now clearly established, that any two of these may co-exist in the same individual. These diseases, too, have much the same history, commencing as far back as they can be traced with certainty. We find them co-existing in Arabia at the rise of Mahometanism, and thence they have spread, for the most part, *pari passu*, wherever conquest and commerce have carried them. May not their close affinity, as thus evinced in the history of their occurrence, yet throw light on their nature and causes? and is there not plausibility in the conjecture, that each, as it prevents its own recurrence, may serve to mitigate subsequent attacks of the others; and that cow-pox, though it may not prevent, yet, as is thought by some, may render measles and scarlet-fever milder, producing, in a less degree, the same prophylactic effect as in case of small-pox?

Many of the Inspectors' reports present, in a tabular form, the monthly deaths from variola; and, with a view to determine the influence of the weather on the prevalence of this disease, I have added the deaths from 1816 to 1853 inclusive, being obliged to omit only eight years in this period. The result is as follows: January, 661 deaths; February, 531; March, 559; April, 309; May, 449; June, 380; July, 288; August, 243;

September, 194; October, 269; November, 370; December, 521: Spring, 1217; Summer, 911; Autumn, 833; Winter, 1713. From this we see that the mortality has been greatest in the winter, and successively less in the remaining seasons; the deaths in the autumnal months being not one half those in the winter. The question may here arise whether the known prevalence of intermittent and remittent fevers in the autumn may not have something to do with the diminished mortality from small-pox, a question which, like that in reference to yellow fever, can only be settled by a large number of statistics.

At different times and in different places, the variolous epidemics have observed no uniformity of occurrence as respects the seasons. Thus, Dr. John Cross published, in 1820, an account of the very fatal epidemic which occurred the year before in Norwich (Eng.), causing 530 deaths, of which 382 took place in the summer, and only 4 in the winter months. In Sydenham's time, according to his own statement, mild variolous epidemics began about the vernal equinox, when of an extended and dangerous kind in January. "These observations," says Dr. Gregory, "are not confirmed by modern statistics." (*Erup. Fev.* page 85.) The last epidemic which the metropolis (London) experienced began in November, 1837, reached its acme in June, 1838, being a period of eight months; then slowly declined, and ceased entirely in January, 1839. The epidemic of 1796 followed a course very similar in all respects. The Inspectors' reports show that we have had occasional mild epidemics of small-pox in the summer, but that those attended with much fatality have commenced uniformly late in the fall, or at the beginning of winter.

In order to determine more certainly if atmospheric conditions or variations, such as we can measure by our instruments, influence the occurrence of small-pox, I have examined carefully the meteorological tables contained in the Inspectors' reports since 1845. As the disease occurs in all climates and seasons, its essential atmospheric condition, if it

have any, is probably of too subtile a nature to be detected by any means which we at present possess. Yet if small-pox be independent of those climatic conditions of which we are cognizant, such as temperature, density, and humidity, it is interesting to know the fact. The following Table gives the average for each month of the temperature and density of the atmosphere, the direction of the winds, and the amount of rain and snow, from 1848 to 1852, inclusive, the year '49 excepted; also the average monthly mortality from small-pox:

| | Jan. | Feb. | Ma'ch | April. | May. | June. | July. | Aug. | Sept. | Oct. | Nov. | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mean Temp. of 3 daily observations | 32° | 33°·5 | 38° 6 | 44°·4 | 5 °·8 | 68°·6 | 73°·8 | 71°·9 | 63°·8 | 55°· | 42°·7 | 32·1 |
| Mean Height of Barom., 3 daily observations | 30·05 | 30·005 | 29·98 | 29·87 | 30 00 | 30·02 | 29·97 | 30·06 | 29 61 | 29·97 | 29·47 | 30 10 |
| Average amount of rain and melted snow. | 2·8 | 2·93 | 3·63 | 2·92 | 4·42 | 2 74 | 3·35 | 3·71 | 2·42 | 1.59 | 2·9 | 4·53 |
| Average days of wind towards equator. | 16 | 13 | 13·5 | 13 | 12 | 8·5 | 1·3 | 11 | 12 | 13 | 17 | 15 |
| Average days of wind from equator. | 5·5 | 6 | 8·5 | 10 | 12 | 15 | 14 | 13 | 12 | 11·5 | 6·5 | 6 |
| Average deaths from small-pox | 39 | 42 | 54 | 36 | 47 | 43 | 35 | 22 | 22 | 25 | 36 | 58 |

Slight as appears the connection between this disease and the state of the atmosphere, there may yet be discovered a close connection between them. Mr. Blodget, of the Smithsonian Institute, in an able article, entitled "The Climatic Conditions of the Summer of 1853," published in the *New York Journal of Medicine* for November last, in speaking of

the high temperature of the summer months, says: "It is more remarkable that some incipient epidemic was not started in full vigor, to rage after the principal inducing cause had passed away." True enough, the miasmatic diseases prevailed in the autumn to an extent almost unprecedented on this Island; and when they had subsided, small-pox followed with a mortality greater than at any previous period.

In the London *Med. and Phys. Journal* for Feb. 1809, Dr. Thomas Christie, Med. Sup. General in the island of Ceylon, writes: "Previous to the introduction of cow-pox (in Ceylon) in 1802, small-pox scarcely ever failed to visit us, at Colombo, during the prevalence of the south-west monsoon." It seems probable that long-continued winds from the same direction may so change the condition of the atmosphere as to introduce a new class of diseases, and this is probably the reason, why at times, and in certain places, small-pox has seemed dependent on the state of the winds. That variolous epidemics are not due to any intrinsic change in the nature of the disease; but rather to changes in the constitution of the atmosphere or of persons, is evident from the fact of an unusual susceptibility to kine-pox, when small-pox is epidemic, on the part of those who have once been vaccinated. During the past spring and winter, I have re-vaccinated quite a large number, and have found but few unsusceptible to a second course of the disease; and other physicians have remarked the same; a fact, by the way, which goes to prove the essential identity, or at least close relationship, of vaccinia and variola, contrary to the opinion of Dr. Gregory.

The annual reports for the years 1824, '30, '34, '39, '41, '42, and '44 give the total mortality, as well as the mortality from small-pox of the colored people. I find that, in these years, 19.6 per cent. of those who died of small-pox were colored, while only 7.8 per cent. of the total mortality was in this class. This corresponds with the received opinion that variola is most fatal among the blacks.

During the six years from 1848 to '53 inclusive, 165 deaths

from varioloid were reported, or 6.2 per cent. of the deaths from small-pox. I am certain, however, that many cases reported as varioloid were really cases of unmodified small-pox. Having of late studied closely the appearances of the vaccine vesicle, I am convinced that many vaccinations which pass as genuine, and leave cicatrices, are spurious and not to be relied on, and that death from variola after true vaccination is much more rare than the bills of mortality would lead us to think. There can be no doubt, too, that some physicians call cases, which they know to be unmodified small-pox, varioloid, and if death result, the misnomer of course enters the certificate.

During the years included between 1842 and 1852, with the exception of '43 and '45, the proportion of male to female deaths from small-pox is given, viz., as 1.3 to 1; from all diseases, as 1.4 to 1. The number of males in the city is considerably less than that of females, and this strange disproportion in the deaths of the sexes has not yet been satisfactorily explained. I have examined the registers of the Northern and North-western Dispensaries, to see if there were a similar disproportion as regards the sex in cases which recover, and I find that, of 464 variolous patients, presenting the disease in all grades of severity, 240 were males and 224 females.

From measles, the deaths, from 1842 to 1852, inclusive, were males to females as 1.35 to 1; from scarlatina as 1 to 1.03. Of the three eruptive epidemic diseases, then measles and small-pox have been more fatal among males; while from scarlet fever, there has been a slight excess of mortality, but perhaps no more than proportionate to the whole number of cases occurring in the two sexes.

I have collected from the registers of the Northern and North-western Dispensaries, statistics of the ages of 549 variolous cases (variola and varioloid). Of these, 93, or 17 per cent., were one year old or under; 163, or 30 per cent., from one year to five; 126, or 23 per cent., from five to ten years; 104, or 19 per cent., from ten to twenty; 54, or 10

per cent., from twenty to forty; 7, or 1.3 per cent., from forty to sixty; and 2, or 0.6, over sixty. Forty-seven per hundred, then, or nearly half of these patients, were five years old or under. This shows the importance of an early vaccination of children.

According to Dr. Hutchison, 64 per hundred of the small-pox deaths, during the past five years, have been under the age of five. So far, then, as the statistics allow us to generalize, it appears also that the proportionate mortality is greater under the age of five than subsequently.

The question may properly be asked, among what class of our population small-pox is most prevalent. May it not be confined chiefly to foreigners, especially the Irish, who have within a few years settled in the city in such vast numbers. The Irish, more than any other class, as is well known, are disfigured by the variolous eruption, and in Ireland the proportion of deaths from small-pox is greater than in any other civilized country. In Dublin, for the ten years ending with 1851, the small-pox deaths were 2.5 per hundred deaths; in Cork 3.9; Limerick 4.1; and in the whole of Ireland during the ten years ending with 1841, 4.9 per hundred. In order to determine more certainly how far the prevalence of this disease in our city is due to the Irish element, I have learned the nativity of 599 variolous patients, treated in the Northern and North-western Dispensaries since 1848. Of these, 331 were born in the United States, 229 in Ireland, and the remainder, 39, principally in England and Germany.

Many, and probably most, of those registered Americans, were of Irish extraction, children of parents who have within a few years emigrated to this country. If we reject from the whole number those under the age of ten years, we shall find that the Irish greatly preponderate in the remainder. Thus, of 163 cases, occurring after the age of ten, I find that 54 were American and 109 Irish. From this it appears that, if it were not for the Irish population, New York would suffer much less from small-pox, probably no more in proportion than other northern cities; and we have a satisfactory explaina-

tion of the fact, that, though vaccination is more and more practised here, the proportion of deaths from small-pox increases. The bills of mortality, instead of proving the inefficiency of vaccination, as might appear at first, really afford a strong argument in its favor; for the Irish, more than any other class, neglect vaccination. Their ignorance in reference to this subject is truly astonishing; many appear never to have heard of it till advised by some friend to have it performed, and others have the most absurd and vague ideas of its nature. The large class of unprotected children furnish foci for the spread of small-pox on almost every street, and were it not for the efficiency of the great Jennerian discovery, we can see no reason why there should not be a proportionate mortality among the American population.

Our sole reliance being on vaccination, the question arises, in what manner it can be made the most available. When the Irish have once arrived and diffused themselves among our population, it is almost impossible to effect a general vaccination among them, and the surest way to accomplish this end would seem to be in making it the duty of the physicians on board the emigrant ships to vaccinate all emigrants not already protected. Once learning the simplicity and importance of vaccination, these people would probably be more anxious to have it performed on their children, born subsequently to their arrival, and by this means not only this but other cities, and the country towns, where the Irish locate, would be much less liable to be visited by epidemics of small-pox.

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ART. VI.—*On the Topical Application of the Nitrate of Silver to the Larynx and Trachea in Croup.* By EDWIN N. CHAPMAN, M.D., Brooklyn, N. Y.

IN the March number of this Journal for the present year, I reported five cases of croup, treated in the last and fatal stage by the topical application of a solution of lunar caustic to the larynx and trachea. Since that paper was published,

five other cases illustrating the same treatment have been presented to my notice, the particulars of which are as follow:

CASE 1.—March 18th, 1854, I was called to Mr. H.'s child, Atlantic street, 10 months of age, ill with the croup for 48 hours; previously to my attendance, the patient had been vomited repeatedly with ipecac. and Cox's hive syrup, without producing any salutary effect on the course of the disease, or mitigation of the laryngo-tracheal, symptoms, which were gradually, but certainly assuming a more fixed and grave significance; these were, whistling respiration, labored inspiration, hoarseness, almost amounting to a suppression of the voice, cough stridulous and dry, excessive thirst, full and bounding pulse. The chest failed to betray any evidences of disease, either as tested by auscultation or percussion.

Before resorting to the nitrate of silver, I wished to give the established treatment a fair and faithful trial, having full confidence in the caustic, as long as the disease was limited to the tracheal and laryngeal mucous membrane. It matters little whether that disease consists of mucous or sub-mucous inflammation, or pseudo-membranous or diphtheritic exudation; over one and all the nitrate of silver possesses a power almost magical.

I directed one leech to the top of the sternum, the bleeding from which was to be promoted by warm fomentations for two hours or more, unless faintness supervened. After the leeching had produced its full effects, a warm bath for half an hour, and whilst the child is in the bath, one-half teaspoonful doses of the following mixture to be given every ten minutes till free emesis occurred: ℞—Tart. antimonii, gr. ij, syrup ipecac. ℥i.

4 P. M. A free and copious flow of blood had followed from the leech, so much so as to make the child pallid and languid; free and powerful emesis from the emetic, attended with the prostrating effects of the antimonial was produced, but without causing the least apparent effect on the laryngeal

inflammation. No mucus was discoverable in the matters vomited. Ordered for the night 15 drops of the above mixture, or sufficient to nauseate every hour.

*March 19th.* No marked change in the condition of my patient. Continue mixture and apply a blister, 4×4 inches, to the top of the sternum. In the evening an emetic of ipecac.

*March 20th.* No alteration for the better; an entire absence of secretion, at least of mucus. No evidences that the chest is implicated in the disease. Continue treatment.

8 *o'clock, p. m.* More alarming and aggravated symptoms begin to manifest themselves; constant labored inspiration, with exacerbations, threatening suffocation; purple, suffused countenance, torpor and lethargy. The medication has failed to check in the least the course of the disease, which has, notwithstanding, slowly but surely advanced to serious, if not permanent obstruction in the windpipe.

I now applied ℞ Arg. nit. ℥ss, add Aq. dist. ʒi misce—to the larynx and trachea, introducing the swab at least three inches below the rima glottidis.

*March 21st.* During the night there was no marked amelioration of symptoms. Applied caustic as before, which resulted in free vomiting of a substance very tenacious and adhesive, albuminous in appearance, and not at all resembling the proper mucous secretion. Reapplied the caustic in the evening with a like result.

*March 22d.* Improved; reapplied caustic; mucous secretion begins to take the place of the albuminous, though it is still glary and lymph-like. Prescribed an expectorant of senega and squills.

*March 30th.* Discharged—cured.

CASE 2.—*May 5th*, 1854. Child of Mr. S., Amity st., 18 months of age, suffering from an attack of the croup for six days. For the last two days it had been under the careful and judicious treatment of Dr. Drake, who had employed all the usual means of combating the disease, viz., antimony in divided doses, mercurials, warm baths, cathartics, &c., but

all without avail. An antimonial emetic failed to operate, though continued until three grains had been given.

The patient presented the following symptoms: laborious inspiration, with a permanent constriction of the calibre of the larynx, and attended with a dry whistling sound, as though the mucous membrane was devoid of moisture; no violent exacerbations; voice muffled and nearly suppressed; cough dry, ringing, and sonorous; pulse full and strong; skin disposed to perspiration; chest not implicated.

As Dr. Drake had tried the approved means of treatment assiduously without producing any beneficial effect, we resolved to resort to the caustic without further delay. It was employed in the same manner and of the same strength as in the last case. Emesis occurred with the discharge of a substance gelatinous and albuminous in appearance, mixed with shreds which had the semblance of false membrane in the formative stage. Ordered ℞ Hydrarg. sub mur. gr. iss., cretæ ppt. gr. viij. ♏, Ft. chart No. viij. S., One every third hour, also one-sixteenth of a grain of antimony every second hour, for the purpose of producing a nauseating effect.

*May 6th.* Laryngeal symptoms slightly improved; reapplied caustic with an effect similar to the day previous; directed a cathartic and omitted the mercurial; ordered ℞ Syr. senegæ. ℥ij; ipecac, ℥i, given to produce vomiting at first, afterwards in ℥ss. doses every hour. May 7th, improved; continue treatment. May 9th, cured.

CASE 3.—*April 26th*, 1854. Mr. McL.'s child, Columbia st., 16 months of age, had suffered with croupal symptoms, of a mild but insidious character, for the last seven days, which, from the onset, were gradually assuming a more dangerous character. At 8, A. M. there were the following symptoms: difficult and labored inspiration; croupal cough; profuse perspiration; loss of voice nearly complete, respiration of natural frequency, and attended with noisy rhonchi throughout both lungs; percussion clear. Directed two leeches to the throat, to be followed, after they had bled freely, by an antimonial emetic.

4 P. M. The emetic operated freely, with a copious discharge of mucus, but without any mitigation in the symptoms. Applied the caustic, the same as in the other cases, and directed a blister 4×4 inches to the chest. Directed also an expectorant, composed of squills, senega, and carb. ammonia, with a nutritious diet.

The child died on the following day at 12 o'clock, M., with symptoms of the same character as those of the previous day, but more profound and aggravated. Inspiration was not only difficult, but short and rapid. The catarrhal inflammation seemed to affect the entire mucous membrane of the respiratory apparatus.

CASE 4.—*March 27th*, 1854. A child of Mr. G., Wolcott street, 20 months of age, laboring under an attack of croup for five days, had been treated by domestic prescriptions until the day previous, when Dr. Brooks, a well-known practitioner of this city was called to attend it. About the same time, Dr. Harris, of Williamsburgh, saw the case. They employed the usual means for combating the disease, but without producing any change in the unfavorable features of the case. In the evening, an attempt was made to introduce caustic into the wind-pipe. On the morning of the fifth day, the caustic was applied a second time.

At 4 P. M., when I first saw the patient, it presented symptoms almost identical with the last case. There was a catarrhal condition, sub-inflammation of larynx, trachea, and bronchial tubes, which had attempted resolution by a profuse secretion of mucus. The child was in a half somnolent, torpid condition, aroused with considerable difficulty, and breathing not only as if there were great constriction about the larynx, but much more rapidly than natural. The tracheitic symptoms, though the mucous secretion was very free, were of the most grave and serious character. Moist rhonchi were heard all over the chest; percussion clear.

We applied caustic, as in the preceding cases, directed an expectorant of senega, squills, and carb. ammonia, and a blister 4×4 inches to the chest.

*March 28th.* The child died at 9 o'clock A. M., of extensive inflammation of the bronchial mucous membrane.

CASE 5.—*March*, 1854, Master W., from Massachusetts, a lad 10 years of age; consulted me on account of an affection of the larynx and trachea of 18 months' duration, attended with a croupy cough, hoarseness constant; subject to exacerbations from changes of the atmosphere; tenderness in the crico-thyroid space. I applied caustic on eight different occasions, with an interval of from four to six days. His symptoms constantly improved, and, May 1st, he was discharged cured.

REMARKS.—Setting aside spasmodic croup, arising from causes sympathetic, all cases assuming a fatal character naturally divide themselves into three classes: the membranous, catarrhal, and diphtheritic. The last differs from the first, in frequently commencing by an exudation in the mouth or face, which, by continuity of tissue, extends into the respiratory tubes. In none of the ten cases reported by me was this diphtheritic exudation perceptible, though my attention was most particularly directed to discover it if present. All were either of membranous or catarrhal character; two of them had perfectly organized false membrane and recovered; of four cases which, from the want of secretion till the caustic was used, and the appearance of the matters subsequently vomited, were judged to be of the membranous variety in the initiatory stage, three recovered and one died. Of the two catarrhal cases, which were nearly moribund at the time caustic was resorted to, both died. One chronic case, from congestion of the mucous membrane of the larynx, was cured. One case, probably membranous, which recovered from the croup, died two weeks afterwards from marasmus.

Of these ten cases (including those previously reported), seven recovered from the disease, and three died.

The duration of the disease before the caustic was resorted to was respectively 72, 60, 36, 48, and 60 hours, and 4½, 6, 7, 5 days, and 18 months. Faithful and thorough medication

was employed in all excepting one, before resorting to the caustic, yet without avail. Not one of the nine acute cases, in my estimation, could, in the desperate strait to which they were reduced, have recovered by any other known method of procedure, excepting from the doubtful and unsatisfactory operation of tracheotomy, which, in hands the most skilful and experienced, yields results far from being favorable to its repetition. We can readily imagine a case in which suffocation might be imminent, from an obstruction localized in the larynx and upper portion of the trachea, where tracheotomy holds out a solitary and perhaps the only hope for the patient. We have no time to wait for the remedial powers of caustic, which, from its very nature, requires an appreciable interval—very likely five or six hours—before its peculiar powers are displayed in subduing the inflammation or disorganizing the pseudo-membrane that may have been secreted. Unless greatly deceived, even such a case would not require the operation, were the caustic thoroughly and efficiently employed at an earlier date, whilst the obstruction is not too serious, and the powers of life are still strong. We sadly need some remedy, more general and universal in its applicability than tracheotomy, to which we may appeal with confidence, in all cases hastening on to a fatal issue, after active and efficient medication has been resorted to, without producing a favorable crisis.

Such a remedy I confidently trust we shall find in the nitrate of silver, when its powers have been more generally tested, and its application to the seat of the disease becomes familiarized by frequent and careful practice. I do not despair of seeing it used with as great an assurance of success as in those other kindred inflammations of the fauces, of whatever nature or kind, in which we cauterize so confidently and with such beneficial effects. Even in diphtheritic pharyngitis, between which and the false membrane of tracheitis there is such a close resemblance, we confidently appeal to this remedy, almost certain that the inflammation will subside, and the exudation be detached in shreds and

disorganized portions, before the almost magical power of this potent article. Its efficacy, when thus applied, can be observed by the eye.

I trust that it will be found that the mucous membrane of the larynx and trachea of a similar organization will be equally as amenable to the treatment by cauterization, as a like disease in the pharynx, whether that disease consists of inflammation, or has resulted, in addition, in a lymphatic exudation of pseudo-membrane. Analogy bears me out in asserting, what my experience demonstrates to my own satisfaction, at least, that similar tissues, affected with similar diseases, require for their cure the same remedial agent, unless there are other good reasons why its powers would be less efficacious in the given case.

JUNE 1ST, 1854.

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ART. VII.—*A Case in which a Cystoid Tumor of the Ovary was Successfully Punctured through the Vagina.* By J. MENNINGER, M.D., of New-York.

AMONG the many diseases to which the ovaries are subject, the degenerations and tumors, especially the so-called hydrops ovarii, are deserving of our special attention. We purpose to speak of the treatment of the latter form of disease by paracentesis, performed through the vaginal wall, in connection with a case in which this operation was recently successfully practised.

Carus distinguishes three different species of ovarian dropsy, viz.: 1. Hydrops ovarii saccatus, or the collection of water or fluid between the serous and fibrous membranes of the ovary; 2. Hydrops hydatidosus, or, transformation of the ovary into a membranous sac, containing real hydatids. 3. Hydrops cysticus, or cellulosus (cystic sarcoma of Abernethy; emphysema cellulosum, or cystose tumor of Mason Good), in which the contents of the tumor are seldom serous, but thick, sanguinolent, purulent like chocolate, ichorous, glutinous, and of different colors. The case which follows is classified under the third form of degeneration.

Paget, one of the most recent and able writers on pathology, (*Lectures on Surgical Pathology.*) arranges cysts under the titles of "simple" or "barren," and "compound" or "proliferous" cysts.

He enumerates the different orders of the former and latter, and brings the above case under the compound or proliferous cysts; but especially of it he says: "these compound cystoid growths may appear equally compound, though they are only simple cysts clustered or grouped together."

CASE.—Mrs. Reyher, 29 years of age, midwife, emigrated from Germany to this country fifteen months since, and has since resided in this city. She is of medium size, well-formed, and, with the exception of her present difficulty, enjoys good health. She was never previously affected with any serious illness; first menstruated in her fifteenth year, and continued to do so regularly until her marriage in her twentieth year; soon after which, she became pregnant, and was delivered of a healthy female child. She did not again conceive, although still living with the same husband. Her menstruation, which reappeared ten months after delivery, was regular until fifteen months before the date of the operation, with the exception of five months, two years since, during which period she suffered a chlorosis, caused by a cold, and depression of spirits on account of the sickness of her husband, who had emigrated before her to America.

On the 25th of November, 1853, the patient was forced to take to her bed on account of pains in her abdomen, especially above the pubes, which she had experienced, but in a less degree, during the previous week. These pains were aggravated by motion, and still more in the effort to evacuate the bladder and the bowels. On the morning of the 26th, I saw her for the first time. In addition to the above-mentioned symptoms, she now complained particularly of frequent vomiting, from which she had suffered during the previous night, and which had greatly increased the pain in the abdomen. The tongue was thickly coated, appetite gone, and the pulse accelerated. Ordered an effervescing draught of carbonate of potash and citric acid, which relieved the vomiting and pain until evening, when both returned, with little less severity than the night before. Upon examining the abdomen, I discovered, on pressing deeply just above the pubes on the left side, a small, resistant tumor, which was painful, but not as in peritonitis, and not markedly more so than the remaining portion of the abdomen. The patient thought herself pregnant, because the menses had not appeared in about eight weeks; but that circumstance did not appear to account for all the symptoms present. The diagnosis remained uncertain. I ordered emollient cataplasms, which gave temporary relief during the night, but on the following morning I found her condition as unfavorable as before. I gave calomel, twelve grains, divided

into eight doses, and followed it with an emulsion of castor oil and manna; this produced a free evacuation of the bowels, and, in consequence, a slight relief of pain. Externally, unguent. hydrarg. cinereum, with iodine, was applied. These remedies, however, gave only temporary relief.

On the 29th of November, the catamenia again appeared, just two months after her last menstruation. The vomiting and pain ceased, the tumor seemed to enlarge, and was now just above the symphysis. In the afternoon, with pains like those of labor, a membraneous mass was discharged, which had the appearance of a miscarriage, in the second month of pregnancy. On the following day, the former pains returned; the bleeding ceased; the pulse was ninety, and small; the patient was weak, and had not been able to obtain sleep for five days.

A more careful examination became necessary, and I now for the first time made a careful exploration of the contents of the pelvis *per vaginam.* I found that the tumor on the median line above the pubes was the same which I had felt three days before more deeply on the left side; that it extended to the left side; or rather, that the tumor, situated deeply on the left side, extended, by enlargement, to the middle and right side. It also rose upward, above the symphysis, three fingers in breadth. The tumor was felt protruding into the vagina, from the left side, crowding the uterus slightly downwards, and to the right side. The diagnosis was a tumor of the ovary, the nature of which remained to be determined, although its hardness, and equal elasticity, its rapid growth, and also the evidences gained from palpitation and percussion, seemed to indicate fluid contents. After the employment of various external and internal remedies, I found that the best means of relieving the symptoms, were the administration of aperients (manna and Seidlitz powders), and the application of cataplasms of flax-seed and chamomile flowers.

After some weeks, the pain occasioned by the evacuation of the bowels and bladder ceased, and the patient felt well while lying in bed. When out of bed, and making exertion, the pain returned, and she would be compelled to lie down. The appetite had gradually improved, but still she was emaciated. In the mean time, I constantly observed that the tumor was enlarging, and that it could be felt more easily in the vagina, with the index finger, than formerly, pressing the womb still more strongly downward, and to the right side, so that the whole now lay entirely to the right of the median line. The tumor extended upward to the umbilicus, and upon the right side nearly to the crest of the ilium; it was symmetrical in its extent and elasticity,

and but one cyst could be distinguished. Still, there was an indistinct feeling on the right side, above the pubes, as if there were two tumors, one lying above the other, the edge of the lower one being perceptible below the edge of the other. Fluctuation could be distinctly perceived through the vagina, but not at all through the abdominal parietes; it was most distinct when the finger, introduced into the vagina, was pressed against the tumor, and percussion was made externally by another. This was the condition of the patient, and the tumor, in December. On the 25th, the menses appeared exactly at the regular period, and on their cessation she thought herself better, and began to walk about; she attended several cases of midwifery, as midwife, during the last days of December, but it aggravated her symptoms so much as to compel her to take to bed again. I had already spoken to her of the probable necessity of an operation, and described to her the method I proposed to pursue,—an operation which had recently proved successful in the practice of my friend Dr. Shnetter, of this city. On the 7th of January, Dr. Shnetter saw the patient, and confirmed the diagnosis, and agreed to the plan of operation. The patient was now failing rapidly; she had hectic perspirations, and the weight of the tumor was a great burden. She herself estimated the circumference of the abdomen, at the lower part, equal to the seventh month of pregnancy; but the tumor did not rise above the navel, and the abdomen was broader and less round and high than is usual in the sixth or seventh month of pregnancy. The patient now grew impatient of delay in the performance of the operation.

The operation which I designed to perform was with slight modification the one proposed by Kiwisch in 1846, and which he several times practised, viz., puncture of the cyst through the vagina, enlargement of the wound, the insertion of a tube, and the injection of warm water to wash out the matter until the entire destruction of the cyst by suppuration took place.

The operation was set down for January 11th; at this time Drs. Boldeman and Stephen Smith were present, and examined the case. Chloroform was administered, but the patient was so restless, and took the anæsthetic so badly, that it was deemed advisable to defer the operation to a subsequent day. On the 13th of January, with the assistance of Dr. Boldeman, I proceeded to operate.

*Operation.*—The patient was placed across the bed, the hips being brought near its edge, her feet resting on chairs, and chloroform administered. I then introduced a curved trocar and canula into the vagina, and, conducted by the index finger of the left hand to the most

prominent point in the tumor, I plunged them into the cyst. The trocar was now removed, and a gush of fluid followed; the canula was retained; through the latter I then introduced a bistoury, curved upon the side, with a button, as described by Recamier,* and, withdrawing the canula sufficiently to allow the cutting edge to incise the wound, I proceeded to enlarge the opening, managing the instrument with the right hand, and guiding its blade with the left index finger. The walls of the cyst were very thick, and were cut with difficulty. Removing now the bistoury, I again pushed forward the canula into the wound, and through it passed a sound which served as a guide to the introduction of a tube into the cyst after the removal of the canula. This tube was a piece of an elastic stomach-tube, about ten inches long and more than one-third of an inch thick, and was retained in the wound to afford an exit to the contents of the cyst. The operation was completed in about twenty minutes. The fluid discharged measured nearly two quarts, and had the consistency of thick pus, and was of a chocolate color. On examining it under the microscope, it was found to consist principally of shrivelled blood-corpuscles, pus globules, and a few epithelial scales.

Upon recovering from the state of anæsthesia, the patient felt well, lighter and easier than before, and complained only of a slight soreness at the point were the puncture had been made. There was no reaction following the operation on this or any subsequent day; she took half of a Seidlitz powder daily, as before the operation, until her convalescence. On the following day, the amount of fluid which had escaped from the tube and vagina since the operation was six or eight ounces; the secretion was purulent, and the tumor was still found to extend midway between the pubes and navel. On the second day, I found my patient in good condition, had slept well, but the matter discharged was more ichorous, and had a penetrating odor. Injections of warm chamomile tea through the tube produced a better secretion, and the bad odor of the discharge disappeared. On the third day, I changed the tube, and, in the absence of a larger one, made use of a large catheter, through which the purulent matter did not find so ready an escape. The patient continued to do well until the sixth day, when she began for the first time to complain of not feeling well, and there

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* . . . . . Si je ne trouverais pas l'ouverture du kyste suffisante j'examinerais s'il ne serait pas facile de l'agrandir avec un bistouri boutonné, courbe sur le plat, conduit par la canule de trois-quarts, etc.—*Revue Médicale Française et Étrangère*, Janvier, 1839.

was evidently some febrile excitement. On the 7th day, her condition was much more unfavorable; the pulse 125, small; great prostration; tendency to faintness, and slight delirium during the night. Conjecturing that these symptoms were due to a retention of the purulent discharge from the cyst, I immediately withdrew the catheter, which gave exit to a large quantity of matter. A larger tube was now inserted and injections more frequently made. Her condition improved, and on the following day she complained only of weakness. I ordered decoct. of cinchona and sulphuric acid, with liquor anodyne, from which the patient derived very marked benefit; in two or three days after, she expressed herself as feeling quite well.

The discharge up to the present time averaged one or two ounces in the twenty-four hours; during the last night, however, it amounted to nearly a quart from a sudden eruption.

On the night of the 22d of January, the tube slipped from the wound unknown to the patient, who slept soundly. So much time had now elapsed, that I failed in my efforts to reintroduce the tube. The finger and tube could be readily passed through the wound in the vagina, but a careful and prolonged search for the opening in the cyst proved unavailing, as the two wounds now did not correspond. I ordered large injections to be made into the vagina, at the same time that a napkin applied to the vulva prevented its escape. By this means I had the satisfaction of seeing pus escape freely with the injection, the latter having evidently penetrated to the cavity of the cyst. On the following day, I endeavored again to introduce the tube, but without success; this attempt was repeated two or three times after, but, as the purulent discharge became free, I desisted, satisfying myself simply that the opening into the vagina was patulous. On the 12th day of the operation, and the third after the escape of the tube from the cyst, nearly two quarts of purulent fluid was discharged with a sudden gush. The quality of this matter differed from that which escaped during the operation only in being of a more purulent character. The quantity of matter discharged now diminished to one or two ounces in the day, and the improvement in the health of the patient was proof that there was now no retention of pus.

I cannot explain these two large and sudden discharges of purulent fluid, the one on the night of the 20th, and the other on the 25th, more plausibly than by supposing that each was the result of the rupture of an adjacent cyst into this one, which communicated externally, the walls of which had become thinned by ulceration. The local changes, which, on examination, were found to have taken place, confirm

this opinion. The uterus immediately regained its normal position in the median line,—the tumor was diminished to the size of a hen's egg, and the discharge from the vagina became much less. The strength of the patient increased in a degree proportionate to the diminution of the discharge. About the 6th of February, the patient was able to be out of bed during most of the day, and the discharge had from this date to the 23d reached its minimum. On this day the menses made their appearance, after which every appearance of the former discharge disappeared, nor could a careful digital examination detect any remains of disease. The patient's appearance improved, and, although she had not recovered her former strength, she returned to her daily duties.

Up to the present time, June 3d, the patient has continued well, with the exception that in March and May she was taken ill with slight fever, gastric symptoms, pain in the præcordia and above the right hip, and enlargement of the liver. The first attack confined her to bed three days; the last, but one. The liver remained enlarged and hard for several days each time. Exposure to cold and mental excitement seemed to be the cause of these attacks. I examined her a few days since, and could discover no trace of her former difficulty.

The puncture of cystoid tumors of the ovary, through the vagina, has been rarely practised, except when, by their protrusion into the vaginal cavity, they have obstructed the progress of labor. The first operation of this latter kind related in English medical literature, was performed by Dr. Ford, the patient surviving the operation six months (Denman.) In the *Medico Chirurg. Trans.*, vol. 7, Mr. Park details the histories of several cases in which ovarian tumors complicated labor; and in three, he resorted to puncture of the cyst, through the vagina; all recovered. Subsequently, Dr. Merriman reported, in the same work,* similar cases.

But the operation of puncture through the vagina, for the purpose of effecting a radical cure of these growths, independently of their connection with parturition, though attended with a fair average of success, has met with little favor, and is not even mentioned in most surgical treatises.

The first operator was Callisen, who punctured the vagina, both for the relief of ascites and a variety of encysted dropsy, as appears from the following passage in his work:† *Sic quoque cautam punctionem*

* *Medico-Chirurgical Transactions*, vol. x., p. 50.

† *Systema Chirurgiæ hodiernæ*, t. II., p. 59.

*per tumorem eminentem, et fluctuantem in vagina uteri cum successu institui.* It seems, however, to have been discussed still earlier; for, on the occasion of Marcan, a surgeon of Turin, communicating an operation of this kind to the *Acad. of Surg.*, Paris, in 1788, M. Allan reminded this body that he had presented a memoir in 1767, wherein he recommended puncturing ovarian cysts through the vagina, in preference to any other part.* The operation has, during the last twenty years, been more frequently performed than previously, and with a degree of success which at least entitles it to serious consideration. Kiwisch states,† that he has operated several times successfully by this method, and remarks that others have also practised it. In a memoir by M. Tavignot, entitled *De l'Hydropsie enkystée de l'Ovarie, et du Traitement qui lui est applicable,*‡ four cases are related. In one, the cyst was punctured to facilitate parturition, and the patient recovered: The second was undertaken, but unsuccessfully to effect a radical cure. The other two were operated upon by Récamier and Michon, and both proved fatal. One had an attack of peritonitis and pneumonia; in the other, upon attempting a re-puncture, the instrument entered the peritoneal cavity. In an elaborate monograph, entitled *Des Tumeurs fluctuantes du petit Bassin, et de leur Ouverture pratiquée par le vagin,*§ by Hyppolite Bourdon; several successful cases are recorded, and the operation is strongly advocated. In Great Britain the operation is rarely mentioned, although English surgeons early recognized the necessity of puncturing ovarian cysts when they obstructed labor. An operation for the cure of ovarian dropsy is related in the *Archives Générale*, as having been performed in the Middlesex Hospital, London. Mr. Ogden reported a case in the *Lond. Med. Gaz.*, May, 1840, p. 348, in which he punctured an ovarian tumor, through the vagina, which, by its pressure, caused complete retention of urine. Before resorting to this operation, however, he punctured the bladder above the pubes. The discharge from the ovarian tumor continued several days and, when it ceased, no re-accumulation of fluid followed, the cure remaining complete. The operation was recently performed in this city by Dr. Shnetter, and was com-

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* *Sabatier, Médéc. oper.*, t. I., p. 210.

† *Klinische Vorträge über specielle Pathologie und Therapie der Krankheiten des weiblicher Geschlechtes.* II Abtheilung, Prag. 1749.

‡ *L'Expérience*, No. 160, 1840.

§ *Revue Médicale*, Sept., 1841.

pletely successful. It is published in the *Prag. Vierteljarschrift*, 1854, and is, so far as we are aware, the first of the kind in this country.

In regard to the propriety of the operation, Tavignot very justly remarks that nature has indicated the proper method of curing these cysts by the frequency with which they have ruptured into the vagina, and completely recovered; and, adding to this the projection of the tumor into the vagina, and its distinct fluctuation, he traces readily the origin of the operation. He bases the propriety of the operation upon the following considerations: 1. The cyst is punctured at its most depending portion, and the escape of the fluid is thereby favored. 2. An ordinary sound being retained in the wound, gives exit to the fluid as fast as it collects, and allows the walls of the cyst to collapse. 3. It favors the formation of a fistula at a point most favorable to effect a cure.

The success of the operation itself depends, in a great measure, upon the freedom of the discharge, as is illustrated in the above case and others to which we have referred. When the matter was allowed to collect, by the escape of the tube from the opening, symptoms of irritative fever set in, and, unless relieved by the free discharge following the injection, the case would undoubtedly have had a less fortunate termination. On this account it is very important that the opening be freely made, and the tube introduced, of a capacity sufficient to allow of the free escape of the contents of the cyst. Another point of special interest in managing the case, is to be careful to maintain the tube constantly in the wound, except to exchange it; for, if allowed to escape, it has, in several instances, involved the necessity of repeating the operation. This seems to be due to the change in position, which the cyst may undergo, and thus prevent the correspondence of the two wounds.

Appended, is a table of all the cases of this operation, with which we have met in our reading, with the results in each case. We have not included cases where the operation has been performed to facilitate labor, and which have, in many instances, been followed by complete recovery. The whole number is ten, of which six were cured, three died, and one had a return of the disease. Of the three fatal cases, in one, peritonitis was set up from a puncture of the peritoneum in attempting to repeat the operation, after failing to find the former opening in the cyst. In this case also the cyst was found to have undergone a partial scirrlus degeneration. In the second, the vagina was opened from above, and the patient died from a complication of dis-

eases, though, for a time she progressed favorably. Of the third fatal case, we have no note of the cause of death; she survived the operation about a month.

*Table of Ten Cases in which Ovarian Cysts were punctured through the Vagina to effect a Radical Cure.*

| NO. | AGE. | OPERATION. | RESULT. | REMARKS. | AUTHORITY. |
|---|---|---|---|---|---|
| 1 | — | Simple incision. | Died on 30th day. | | M. DUBOIS, *Revue Médicale*, 1838. |
| 2 | 28 | | Cured. | | M. RÉCAMIER, *Dict. Med.*, t. 5. |
| 3 | 26 | Passed a long curved trocar into abdominal wall and downward through the cyst into the vagina. | Died on 20th day. | Peritonitis and lung complication | M. RÉCAMIER, *Revue Médicale*, Jan. 1830. |
| 4 | — | Punctur'd with a pharyngotome | Cured. | Cure complete on the 39th day. | M. RÉCAMIER, *Revue Médicale*, 1840. |
| 5 | — | Puncture with trocar. | Return of disease. | Canula was not retained in the wound after puncture. | M. NONAT, *L'Experience*, 1840. |
| 6 | 35 | Puncture with trocar. | Death in 6 hours after last operation. | In attempting a second operation the trocar entered the peritoneum. | M. TAVIGNOT, *L'Experience*, 1840. |
| 7 | — | | Cured. | Discharge continued 64 days. | MR. ARNOTT, *Archives Générales*, vol. 56, p. 487. |
| 8 | 32 | Simple puncture with trocar | Cured. | Discharge continued several days. | MR. OGDEN, *Lon. Med. Gaz.*, vol. 26, p. 349. |
| 9 | — | Puncture with large incision. | Cured. | Operation performed in New York. | DR. SHNETTER, *Prag Vierteljahrschrift*, 1854. |
| 10 | 29 | Puncture with large incision, and introduction of large tube. | Cured. | | DR. MENNINGER, *N. Y. Jour. of Medicine*, vol xiii. (N. S.), p. 75. |

ART. VIII.—*Extracts from the Report of the Proceedings of the New-York Pathological Society.* (Selected and prepared by Committee of Publication.)

*Cancer of the Breast.—Appearances of Retrogression of Cancer.* By T. M. MARKOE, M.D., one of the Surgeons to the New York Hospital.

Dr. MARKOE exhibited specimens taken from a woman who had been under his care some two years, and gave the following history of her case:—She died at the age of 51. In one of her breasts there appeared, some years ago, a slight discolored spot, which soon assumed the form of a tumor, and at length grew to occupy the whole centre and substance of the breast. Soon after the tumor had progressed thus far in the first breast, a similar tumor made its appearance in the other breast, and progressed in the same insidious manner, without inflammation or redness, and, at first, without much pain. As the breasts grew to a considerable size, they became hard, and she suffered a great deal of pain. This period lasted about four years, during which the progress was very slow and gradual. About this time she came to this country from England. For a year or more after her arrival, no apparent change took place, except that both breasts had become nearly of a size; they were as large as the two fists, hard, and insensible. She made use of some quack remedies, which had the effect, after a year or two, of reducing the volume of the breasts; they also became less painful, and the skin was shrivelled and horny, so that the nipple began to look like a warty excrescence. There seemed to be a flat indurated substance under the nipple, with hard lines passing from it. At this period she came under his care, not on account of her breasts, for she supposed they were in a fair way of being cured; but for some vague affection in the hypochondriac and epigastric regions. Upon investigating these symptoms, he was led to suspect a transfer of the disease of the breast to some of the internal organs. Flatulence was a symptom throughout the progress of the disease. After a time, the abdomen became somewhat distended with fluid, which increased until the case became a fair one of abdominal dropsy. He put her upon a mild mercurial course, which unexpectedly produced severe ptyalism. For a time after this, she was so much more comfortable that he ceased to attend her. Finally, she again sent for him, and he found that the dropsy had reached a point which threatened suffocation. He proposed tapping, but she refused until suffocation became imminent, when she yielded, and he drew off twenty-one quarts. Symp-

toms threatening peritonitis supervened, but soon subsided, and she rapidly recovered. The tapping was repeated at intervals of five to seven weeks while she lived; the quantity of fluid removed increasing at each repetition of the operation, from 21 quarts at the first, to 35 quarts at the eighth. After each tapping, she would get up and resume her business, and continue thus until the distension of the abdomen became so great as to compel her to seek relief in the operation. Previously to the last operation, she was attacked with vomiting, or rather rejection of her food. She died exhausted by the long continuance of the disease, the rejection of food, and excessive pain.

On post-mortem examination, three or four quarts of clear, transparent serum were found in the abdomen. The viscera presented a beautiful appearance; the intestines stood out in relief, as if injected with plaster; the surface was studded with tuberculous-looking masses, closely packed together, varying in size from a pin's head to a pea; and scattered here and there were little transparent vesicles, containing fluid. Around these little masses there was a peculiar vascularity, and the whole surface of the small intestines were more or less agglutinated by old false membrane. The principal seat of this deposit was in the small intestines, but the spleen was covered entirely with something of the same nature. A portion of the liver was attached to the ascending colon; the parietal peritoneum, though not injected in the same way, presented the same tubercular appearance. He supposed he had found, in the evidences of chronic inflammation, the cause of the dropsy; but further examination revealed the portal vein compressed by the deposit of new matter in that portion of the mesentery which enclosed it, this deposit extending along the vein to the liver. The vein itself was healthy. This condition of the vein was probably the principal cause of the dropsical symptoms.

At the lower part of the abdomen, he found a condition of things which he had not before seen. The whole of the intestines appeared as if their cavity was injected; they could be felt, through the abdominal wall, after each tapping, like coils of rope. The explanation of it was here seen; the coats of the intestines were infiltrated with this matter, so that they were thickened and swelled out like a solid cord. It was not easy to recognize a canal in the upper part of the rectum, but the lower portion was more natural. The same deposit covered the uterus and ovaries; a fallopian tube had been caught in one of the serous cysts upon the ovary, and was stretched out as a broad band over it. The new deposit, whatever it was, seemed to be confined to the peritoneum and portal vein.

The breast was in the same condition as when she first came under observation, two years before.

On section, the knife passed through a dense yellowish white substance, having the appearance of partially dried fibrous tissue, and spread out in a layer of about one-third of an inch thick under the nipple, to which the nipple was attached. No trace of the normal structure of the gland was apparent. The shoulders and back were covered with tubercles under the skin; the muscle and bone seemed to be perfectly healthy.

The most important feature in this case was the fact of an apparent absorption or retrogression of a cancerous tumor. The history of the breasts would establish pretty clearly that it was a case of cancer; and if we could determine that the abdominal deposit was cancerous, it seemed to be a pretty clear case of partial disappearance and atrophy of a cancerous tumor, with reproduction in another part. One symptom which seemed to him as most certainly indicating the character of the disease, was the hard tubercles all over the shoulders and back, which by their prominence made the surface irregular. He was not, however, fully satisfied of the cancerous nature of the deposit, but its general appearance led him strongly to suspect it. The only other deposit would be tubercular, but in this case there would have been false membrane effused, which did not exist in any considerable degree. Every part was examined except the brain; in one part of the lungs there was a very little of this tuberculous-looking matter. As this was a point of much importance, he had made a careful examination. The heart presented one very small tubercle, as large as half a pea, just above the place where the coronary artery curves around the base of the auricle. He could not ascertain that there was any hereditary predisposition.

Prof. CLARK said that he had seen one case of cancerous matter deposited upon the peritoneum. In that instance it was a small, white, shining, irregular deposit on the surface of the peritoneum, covering the whole of it. There was scarcely the space of a line in width that had not some of that matter upon it; he had now forgotten whether it was primary or secondary, but he believed it was the latter. The tuberculous deposits are almost always connected with a considerable amount of fibrinous effusion, which produces agglutination of the intestines, and, unless seen very early, they will be found so connected. At a very early period they appear transparent, deposited rather under than on the membrane. But there is still another deposit, rarely met with, which might give some explanation. It is that which occurs

from inflammatory action, and is caused by the fibrinous matter which, from the friction of the intestines, collects into little nodules, exactly as we see nodules in the spleen. It is possible that this is a case of that rare form of slowly organizing matter. The little tubercles situated under the skin, when not cysts, from which they are easily distinguished, are, in ninety-nine cases out of a hundred, of a cancerous character.

The specimens were then referred to Dr. Clark for examination, and a report at a subsequent meeting.

*Heart-Clots.* By JOHN COCHRAN, M.D., Surgeon to the Brooklyn City Hospital.

Dr. COCHRAN presented specimens removed from a man 32 years of age. This person had been ill more than four years. When he first came under observation, his extremities were œdematous, and the abdomen filled with water. On making a physical examination of the chest, he found the ordinary symptoms of considerable hypertrophy of the heart, complicated, as he thought, with valvular disease on the left side. The urine had a high specific gravity, and threw down a copious deposit of albuminous matter when subjected to the proper tests. The patient gradually grew worse, and at length died. On examining his heart after death, it was found enlarged, but no disease of the aortic valves existed; a polypus six inches long was found extending up the aorta, which he supposed might have produced death. One of the kidneys was healthy; the other presented but little normal structure.

Prof. CLARK said that, in regard to the occurrence of these polypoid clots, which have been supposed to exist previous to death, and to have been the cause of the fatal termination of any particular disease, ever since the publication of Dr. Meigs' papers upon the Heart, &c., his attention had been directed to the subject, and he did not remember to have seen, in a single instance, any satisfactory evidence that coagulation of the blood had taken place before death. Such a thing does happen, but it must be of rare occurrence. Dr. Cheeseman had a specimen that was unequivocal; it is now in the museum of the New-York Hospital. The clot formed a sort of rounded ball, which acted like the ball-valve in a syringe, and finally obstructed the circulation completely. He had seen one or two other instances; in one the clot became attached to the pecten muscles of the heart previously to death, as was proved by the fact that the inner portion of it had softened, while the exterior remained firm. He thought it impossible that this

change should have occurred after death. In all cases where the evidence had been entirely satisfactory, the coagulum has had a whitish appearance. This case appeared to him like those he had been accustomed to consider mere coagulation of the blood at the heart. The firmness of the clot did not exceed what might be found in any coagulated blood, and it is very common to find the coagulum bound down, and embracing the pecten muscles so as to be firmly attached.

*Condition of Muscular Fibres in a Ruptured Heart.* By Prof. Clark.

Prof. Clark read a report on the condition of the muscular fibres in a ruptured heart, presented at a previous meeting for Dr. Uhl. The heart at the time of the examination had been removed from the body twelve days; a part of that time it had been kept in diluted alcohol, and for about six days it had been macerating in cold running water. The fibres that had been exposed to the action of water directly, had nearly all lost their striated appearance, and had become markedly granular. But when a new section was made, and the fibres examined from it, they showed the transverse marking very distinctly, and many of the longitudinal striations. They appeared perfectly normal. This was true of both the right and left side, and as demonstrable even in the immediate neighborhood of the rupture as in any other part. There was, besides, nothing of the pale or yellowish color which so often accompanies the granular degeneration of muscular fibre; on the contrary, the tissue had the deep brown healthy color, except where it had been changed by the direct action of the water. It was worthy of notice, however, that on the right side were to be seen numerous adipose cells, grouped irregularly, separating the muscular fibres, but causing no change in their structure. This fact has been often noticed in hearts that are undergoing the adipose degeneration. In this instance the adipose matter was not found among the fibres of the left side, and on that side there was no noticeable encroachment of the adipose upon the muscular tissue. At a later period he examined this same structure, and it seemed that the change in the muscular fibre had advanced considerably, for then the specimen had been lying in the water two weeks more, and there was apparently more degeneration than could be at first seen. He was inclined to the opinion that considerable of this change was owing to maceration in water. *March 9th*, 1853.

*Report on the Case of Cancer of the Breast.* By Prof. CLARK.

Prof. CLARK reported upon the specimens presented to the Society at the last meeting by Dr. Markoe. He thought the white deposit upon the peitoneum of the intestines, and other abdominal organs, was of a cancerous nature, and if it was cancerous, the structure was such as to place the specimen upon the very border, when cancer becomes blended with, or runs into fibrous deposit. First, the structure was mainly fibrous, the fibres being of the fine, silky variety. The fibres at points separated, leaving meshes which were filled with cells; in some of these meshes there was but one cell, in others there were several. They varied in size from $\frac{1}{100}$ to $\frac{1}{2000}$ of an inch. Over these fibres there was a moderate amount of fatty matter. A few mother cells, that is, cells of more than the usual size, and containing other cells, were floating free in the fluid. Second, the structure was made up of cells of about the size of blood-corpuscles, some of them granular in whole or in part. A number of the cells had one diameter about the same as those last described, and the other diameter from one-half to twice the length of the first. There were also oval cells with clear nuclei. Some of each of these two kinds of cells were found to be elongated into fibres, at one or both extremities. Third, in addition to these, were cells of a much larger size, and most of them granular, or nucleated, their diameter being three times the size of the round ones just referred to. Fourth, there were a few *caudate* cells. All these cells were found to contain fat. This was the appearance of all the small tumors upon the peritoneal surface. On examining the breast, no satisfactory evidence was found, that the degeneration was of a cancerous nature. There was some of the white fibrous and yellow elastic tissue, and round fibres in considerable abundance, that did not exist in the peritoneal specimen; and also several cells were observed, having a diameter of nearly $\frac{1}{800}$ of an inch, some of them appearing as if about to decay, while others had a recent fresh look. Nothing farther was found, with reference to the thick deposits between the peritoneal and mucous surfaces of some parts of the intestine. On submitting the mucous membrane and muscle to microscopical examination, more than the usual quantity of fibrous tissue was found in the rectum, while there was scarcely any remains of the proper muscular structure. In some other portions of the intestines, there was muscular tissue in abundance. The absence of muscular structure in the rectum, was apparently dependent, first upon the increase of fibrous tissue, and second, upon an almost countless number of small cysts; these cysts varied in appearance in different portions of the intestines. In the rectum, they were mostly rounded,

and so placed with reference to the fibres, that the latter separated and surrounded them, and, uniting again, continued on their course. Sometimes three of these cells were lying in apposition, and at other times they were isolated. The cells were all filled with extremely minute granules of very uniform size. There was evidently some change in the muscular structure, because it could not be seen, owing to its being covered with a granular matter of a kind different from that in the cells. In the small intestines, they were almost all elongated, and much smaller in size than those found in the rectum. It seems quite probable, that the serous cysts, which were of a size appreciable to the eye, were the same with the microscopic cysts lying immediately under the peritoneal covering, and extending to the mucous membrane, but greatly developed. He concluded, that, if the deposit upon the peritoneum was cancer, and he thought it must be, then the history of the tumors in the breast would compel us to suppose that they also were cancerous. The examination, however, did not show them to be cancerous, and as they had remained in a shrunken condition for two years, and as no vestige remained that could be considered normal structure, we must infer that there had been a retrograde movement of a malignant disease. The fact that there was no breast structure remaining had an important bearing upon the question of the nature of the disease.

*Tumor of the Uterus.* By Prof. CLARK.

Prof. CLARK then exhibited a uterus having a tumor as large as an orange on the posterior surface, of the nature of which he was not certain; he thought it was fibrous. It was fairly within the walls of the uterus, and had the appearance of a cancerous tumor, and when under the microscope it looked very much like cancer, yet he thought it not usual for a cancerous tumor to grow as this one did. At first view it might seem to be fatty, but this was not the case; it had a decidedly fibrous structure, but he doubted if it possessed sufficient elements of cancerous disease. The examination under the microscope did not satisfy him that the tumor could be referred exclusively to either form. It had the feeling of contained fluid, and he expected a fluid to escape when it was laid open. The patient had repeated uterine hemorrhages, but the hemorrhage did not come from the tumor; the inner portion of the uterine wall was reflected upon the tumor in such a manner that the latter had no connection with the internal cavity. The fact is worthy of notice, that, though the uterus was the seat of repeated hemorrhage, and had been for six weeks, yet the appearance of the uterine membrane did not account for the discharge of blood from it.

Prof. GILMAN believed, that when tumors like this occupy the uterine wall, and are so near the uterine surface that they project into the cavity of the peritoneum, and are fibrous in their character, they very rarely cause uterine hemorrhage, but when they project into the uterine cavity, even when they are covered with uterine tissue, and much more when not so covered, they are very certain to produce hemorrhage. They are then called polypi of the uterus. The difference in respect to the tendency to bleed seems to depend entirely upon their location; if they are near the mucous membrane, hemorrhage takes place. He had never seen any explanation of this fact that was satisfactory to him, and he was himself unable to offer any explanation. He had seen these fibrous tumors in every stage of development, from their being imbedded in the uterine wall and projecting only one-third of their bulk, and progressively as they projected more and more into the uterine cavity. He had seen them when hemorrhage had been so great as to endanger life, and in one instance to prove fatal. In examining these tumors with the speculum, he had found them paler than the uterine tissue, and he supposed the hemorrhage proceeded from the lining membrane of the uterus, and not from the tumor.

Prof. CLARK remarked, that in this case there was no particular point indicated as the seat of the hemorrhage. The relation existing between polypous and fibrous tumors, to which Dr. Gilman had referred, was, in his opinion, simply this: that they were both composed of the same tissues, but in different proportions. The statement, that the hemorrhage produced by fibrous tumors depends upon its projection into the cavity of the uterus, was not strictly applicable to this case, as almost the entire uterine wall lay upon the anterior surface of the tumor. The common form of uterine polypus is more vascular, and frequently not only contains vessels, but sinuses filled with blood.

Prof. GILMAN thought the truly pediculated polypi were not a particle more vascular, and had no more sinuses in them than those covered by the peritoneum, and projecting into the abdomen. *March 23d*, 1853.

*Cancer of the Stomach.*—Dr. UHL presented a specimen of cancer of the stomach which occurred in a German, 68 years of age. He was taken a few days before death with slight diarrhœa; on the third day he went to the privy, where he was soon after found in a fainting condition; he continued in this state several hours, and died. On post-mortem examination, two tuberculous cavities were found in the lung, of about the size of a hen's egg. On opening the stomach, this cancer presented itself, extending from one extremity of the organ to the

other, but not involving either orifice. The most singular feature in the case was, that the patient had never exhibited any symptoms of cancer whatever; he had only complained of a bad cough, and had emaciated; no cause of the diarrhœa was ascertained, nor had he ever suffered from it before.

Prof. CLARK said it struck him as a curious fact with regard to this specimen, that the mucous membrane seemed to be entire over the disease, the cancerous element being at a little depth below the surface. On the larger protuberances, the epithelium was greatly hypertrophied. The want of symptoms might perhaps be owing to the fact that the cancer was confined to the smaller curvature, and another circumstance which would tend to explain it, was the condition of the pyloric orifice, which was entirely free. Although the disease extended one-half of an inch below it, there was no perceptible constriction of the opening.

*Compound Benign Tumors.* By Prof. VAN BUREN.

Prof. VAN BUREN presented two specimens of a similar nature, though taken from different individuals. They were benign tumors, but did not belong to any species generally recognized under this class. They had a compound character, the main constituent of the tumors being fat, and the intervening tissue being a material which has generally passed for bone. The first was laid before the Society some time ago by Dr. Finnell, having been removed from a man who died suddenly. It presented a colorless prominence, and on being laid open was found to consist almost entirely of fat; but in the centre was a bone-like mass, constituting about one-fourth part of the entire bulk of the tumor. This mass he had carefully examined, microscopically and otherwise. The other tumor was very much larger, a cast of which was exhibited at the last meeting, by Dr. Lattimore. It was situated over the nates, and was attached simply by the integuments. On laying the tumor open, it was found to present a very unusual appearance; the larger proportion was fat, and intersecting it were streaks of white, hard, fibrous tissue, and in this tissue were masses of irregularly-shaped knobs or bodies which would pass for bone. The whole character of the tumor was marked by the presence of this bone-like material; it became necessary to saw it in laying it open. These tumors presented a great similarity in their composition; in the smaller there was but one mass of bone, and this occupied the centre. To the naked eye it had the appearance of bone, but on close examination it was found to contain phosphate of lime, and on submitting it to the microscope it presented no evidences whatever of bone structure. It appeared to be an amorphous mass of

bone salts, without any definite structural arrangement, the phosphate and carbonate of lime being in a state of aggregation or precipitation. The bone-like matter of the larger tumor was of a precisely similar character; and in neither was there the slightest evidence of organization. The most interesting constituent of these tumors was this bone-like material, from the fact that when these concretions have been met with hitherto, they have generally been described as masses of bone, and considered to be ossification of the tissues. This view Dr. Van Buren believed to be entirely incorrect, inasmuch as they are not masses which have undergone ossification, but are merely aggregations of the salts of which bone is partly composed in its normal condition. They are similar to the lamellæ sometimes found beneath the serous coat of arteries. He recollected having found a mass in the substance of a liver which had the same external appearance as the mass in the smaller tumor. He presumed this had the same character as the degeneration which false membrane undergoes, forming bone-like plates on their surfaces, as is sometimes seen about the arachnoid and pleura. He had occasion once to operate upon a man with double hydrocele, in whom one tunica vaginalis had undergone almost entire ossification. It was necessary to extirpate this, and he found there was a material in it resembling bone in every respect, and also a material resembling cartilage, but he did not then know whether this condition was owing to ossification or to some simple concretion of bony constituents. The term *calcification* has been very appropriately applied to these hard, bone-like formations, so frequently met with.

Prof. CLARK remarked, that the occurrence of fatty matter and fibrous structure in the same tumor was of common occurrence, and it has been supposed that cancerous and fatty tumors were combined; but he had no recollection of any tumors of the fatty kind containing elements of bony structure, and he thought that Dr. Van Buren had stated correctly the character of the pseudo-osseous structure. He had himself made exhibitions of similar materials, from other parts of the body, to the Society: for instance, the dura mater, from which a large tumor was taken, projecting into the brain, and at the time it was stated that it did not contain osseous structure. This fact, he believed, was generally recognized. Dr. Walsh named this condition *calcification*, in distinction from true bone structure. The latter, Dr. C. believed, seldom or never occurred, except in the uterus, and occasionally in the scrotum. All the other deposits resembling bone have received the name of calcification. *April* 1*st*, 1853.

## PART SECOND.

## CRITICAL ANALYSIS.

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ART. IX.—*The Dublin School on the Heart: A Retrospective Review of its Principal Contributions on this Subject for the last Thirty Years.*

1. *Cases of Disease of the Heart.* By DR. ADAMS. Dublin Hosp. Rep. 1827.

(6.) *Patency of the Aortic Valves.* By DR. CORRIGAN. Ed. Med. and Surg. Jour. 1832.

And the following from the Dublin Quarterly Journal of Medical Science:

2. *Observations on Pericarditis.* By MR. MAYNE. 1835.
3. *Contributions to Pathological Anatomy.* By PROF. SMITH. 1836.
4. *Diseases of the Brain dependent on the Heart.* By DR. LAW. 1840.
5. *Certain States of the Heart in Fever.* By DR. HUDSON. 1841.
6. *Functional Derangements of the Heart.* By DR. CORRIGAN. 1841.
7. *Certain Affections of the Heart.* By DR. GRAVES. 1842.
8. *Clinical Researches.* By DR. O'FERRALL. 1843.
9. *Phenomena of the Circulation.* By DR. LEARED. 1852.
10. *Pathology of the Heart, &c.* By DR. MCDOWELL. 1852.

(7.) *Clinical Lectures, &c.* By R. J. GRAVES, M.D. Phil. 2d Edit.

11. *A Treatise on Diseases of the Heart.* By O. B. BELLINGHAM. Fannin & Co., Dublin. 1853. Part I. 8vo, pp. 250.
12. *Diseases of the Heart and Aorta.* By WILLIAM STOKES, M.D. Lindsay & Blakiston, Philadelphia. 1854. 8vo, pp. 689.

IF we range through the galleries of Rome, Florence, Paris, or Dresden, we find that from certain marked similarities in grouping, coloring, or shading, artists of different nations or cities are classified in what are termed *Schools*. The genius of a nation or a university

may in like manner be read in the portraits of disease. The records of medicine plainly show French taste and enthusiasm, German patience and erudition, and Anglo-Saxon common sense and utility.

Though we mean to be strictly just, yet, speaking of hearts and the pleasant Irish capital, we ought perhaps, in candor, to put the reader on his guard by saying, that we have a little amiable weakness in that direction, and cannot discuss the subject without a slight movement of our own palpitating organ. We rejoice, after years of waiting, to pay a friendly debt. In praising our Dublin friends where it is so justly due, we know we but echo the feelings of hundreds of our medical countrymen, who have enjoyed their contributions or generous hospitalities. Nowhere are Americans so rapturously received even by the very beggars. These patriotic times may not be the best to discharge a debt of gratitude by talking of nationalities; but we belong as physicians to the universal brotherhood of letters, that recognize equally the intelligent and worthy of every land. Besides, we are not discussing the good or evil qualities of Ireland, or its resident or emigrant poor, any more than Donnybrook Fair or St. Kevin's goose. We are simply describing the choice spirits of a naturally select class—the medical writers of the capital.

Many circumstances have latterly combined to elevate the Medical School of Dublin. Something may be due to natural emulation with Edinburgh and London. It is a quiet, beautiful city, with little of the fever of trade. Like Heidelberg, Oxford, or New-Haven, it is specially fitted for study. When the Irish capital lost her parliament, Trinity College remained, like an only child, her darling pride. If her absentee aristocracy forgot their country, she valued more the only nobility we republicans recognize—that of intellect. The heads of the learned professions became the magnates of Dublin society. Her physicians have long been perfect gentlemen. They have risen above the weakness of clap-trap. They have worked like men, and taken no little airs to attract attention.

We once knew a droll backwoods clergyman of the Dean Swift order, who reproved Sabbath-breaking in the sugar season, by closing a sermon on the virtues of the prophet Daniel with the astounding exclamation, "Daniel never boiled sugar on Sunday!" Our praise has a similar double meaning. While momentarily on the stool of censorship, we venture in kindness, a gentle reproof of our worthy combative friends, who either too sensitively claim, or who morbidly grudge, the honors of medical discovery. So we commend the men of Dublin. They have had no speculum, heart, or throat quarrels—no great battles be-

tween progressives and conservatives. They have easily and justly decided all questions of ownership in professional thunder. They have needed no such storms and earthquakes to display the shining ore, but have regularly digged for their treasures. In fact, they form in practice that precursor of the millennium, a medical peace society.

They generously quote one another, and we fancy, in this respect, are more liberally eclectic than our English cousins, in giving credit to their French, German, and American neighbors. They are safely and yet earnestly progressive. We like their unpretending, straightforward style. They have a refreshing way, too, of dealing bountifully with facts, and then, in a sort of Hippocratic fashion, summing up with a few aphorisms in the shape of modest inferences.

Lastly, the highest praise we can give this, or any other school, is, that it is eminently *practical.* To cure the patient is more glorious than to spin the most ingenious theory, or make the most beautiful dissection of his diseased body. Etiology, diagnosis, pathology, everything, are with them still auxiliary to treatment. They are not ashamed of details in therapeutics or niceties in diet,—reminding us of the coveted epitaph of one of their noblest, the lamented Graves: "He fed fevers."

We may criticize any individual faults in the future. But to the proofs: two regular treatises on diseases of the heart have just appeared from the Dublin press, by Drs. Stokes and Bellingham, and we deem this a fitting occasion to review these, and to preface them by a few kindred monographs from the same school, as an introduction.

As a matter of convenience, we have commenced with the earliest, giving the date of each in order, and reserving the larger portion of our space for the later publications of Drs. Bellingham and Stokes. Minor papers from the authors quoted, and several others, have been omitted for want of room.

Dr. Adams *on Diseases of the Heart.* 1827.—This is a capital production of 100 pages, containing a series of well-described cases of pericarditis, hypertrophy, fatty softening and valvular diseases, with their autopsies, and many ingenious and philosophical observations on the mechanism and pathology of cardiac disease. Dr. Adams' paper, it will be seen, was written four years previous to the publication of the first edition of Dr. Hope's work, and many new views, generally attributed to Dr. Hope and later observers, in justice belong to Dr. Adams. His countrymen constantly refer to him with much deference. Dr. Corrigan's first paper will be noticed with the last.

Mr. Mayne *on Pericarditis.* 1835.—Mr. Mayne's monograph is

an instructive record of six cases of pericarditis read before a medical society, and reference to five others which were omitted for want of time. They were interspersed with a series of judicious reflections. Out of these eleven cases, *epigastric tenderness* occurred in ten, generally to the left side, and was the most distressing symptom in five instances. Dyspnœa existed in ten, and in one only was very distressing. In ten cases, too, the pulse was rapid in all periods of the disease, rarely below 120, in two it was intermittent, and in all the instances that reached the third stage, it was weak, small, feeble, irregular, and intermittent. His paper appeared soon after Dr. Stokes' upon the friction sounds in pericarditis, and confirmed his views.

Prof. Smith *on Free Oil in the Blood.* 1836.—The contributions of Prof. Smith in this paper are devoted to "the more remarkable lesions of the heart and great vessels."

The most curious result of these investigations was the discovery in two cases of death from fatty heart, of *free oil in the blood.* The first was that of a lady aged 90, who died suddenly, as was supposed, of debility and old age. On examination, the pericardium was found distended with blood from a small lacerated opening in the anterior part of the left ventricle. The head was loaded with fat; the muscular substance soft, easily broken with the finger, pale yellowish in color, and greasing the scalpel; upon the surface of the blood escaping floated numerous globules of oil. The division of the vena cava gave exit to nearly a tablespoonful of a clear, perfectly transparent, limpid oil, followed by the blood of the vein. Nearly an ounce might have been collected all together. The second case was that of a poor woman aged 70, admitted into Richmond Hospital, who died half an hour after, apparently from exposure and exhaustion. Similar appearances of fatty heart were found, only there was no rupture. "The surface of the blood was thickly covered with globules of limpid oil."

Dr. Law *on the Connection of Cardiac Disease with Softening of the Brain.* 1840.—Of Dr. Law's contributions we can notice only this, showing the effect of cardiac disease in producing cerebral softening, with, apparently, apoplectic symptoms. The previous researches of Legallois, Richerand, Brichteteau, Lallemand, and Rostan are gracefully noticed. The observations of Dr. Law are founded upon four cases of disease of both aortic and mitral valves, causing, in every instance, *obstruction*, in which, on the post-mortem, softening of the brain was discovered.

A fifth case of paralysis and idiocy, and other signs of cerebral

disease, in connection with a valvular murmur, with violent cardiac impulse, was partly cured by an accidental burn.

Dr. Law considers that such brains become anæmic from the obstruction of the cardiac disease to the flow of blood, and that, from its consequent impoverished state, softening occurs in the brain, just as mortification occurs from obstructed circulation elsewhere. The treatment pursued was the exhibition of stimulants, such as camphor mixture, Hoffman's anodyne, carbonate of ammonia, and tonics consisting mainly of iron and nux vomica, aided at times by very moderate derivation of a few leeches and small blisters to the neck.

Dr. Hudson *on the Cardiac Indications for Opium in Fever.* 1841.—The contribution of Dr. H. is founded upon the careful analysis of twelve cases of typhus in the epidemic of 1840, in which a series of cautious investigations led him to the conclusion, that precisely the same rule for the exhibition of opiates was necessary in fever, which Dr. Stokes had previously laid down for the use of *wine;* and that feeble or absent impulse, and first sound of the heart, equally demanded opium and wine; while with strong impulse and full sounds of the heart, both were alike injurious, aggravating the cerebral symptoms.

The post-mortem examinations confirmed these views with regard to softening, as, wherever it occurred, these remedies were well borne.

With softening of the heart, too, there was, in the brain, *venous* congestion; while, with the opposite state, it was arterial. These facts, he thinks, explain the benefits of opposite modes of treatment in delirium tremens.

Dr. Corrigan *on Inadequacy of the Aortic Valve.* 1832.—*On Functional Cardiac Derangements.* 1841.—Dr. Corrigan has long ranked in the first class, in his own country and elsewhere, as an original and laborious observer in cardiac disease. We might have added to our list, at the head of this article, a most ingenious, though less practical paper "on the mechanism of the *Bruit de Soufflet,*" published in 1836. But we shall hardly have room to do even passing justice to the two we have selected.

The paper on aortic patency, being one of the earliest special contributions on the subject, was much prized. He divided these aortic valvular imperfections into the following classes:—1. The valves "absorbed in patches," and presenting "holes," through which the blood leaked. 2. Ruptured valves, "flapping back into the ventricle," and allowing the blood to rush back. 3. Valves "curled" or con-

tracted, so that they cannot spread out and fit. 4. Valves separated from each other by dilatation of the orifice itself, so that they are "unable to meet."

We have long been convinced that, except in vigorous plethoric cases of that rare form of disease, pure hypertrophy, without valvular complication—the bleeding and cupping plan (*coup sur coup*) of Bouillaud,* Hope, and others, with much valvular difficulty, was commonly injurious, and that these cases were generally over-treated.

Dr. Corrigan very judiciously remarks:

In these instances, hypertrophy is recognized as a provision of nature to make the power of the heart equal to the obstacle it has to overcome. The consequence of the neglect of this principle has been that, too often, in the treatment of a valvular alteration of the heart, there has been a constant struggle between nature and medicine. Nature has been making the organ equal to its task, while medicine has been directed to counteract nature's efforts, by weakening the organ to render it totally incapable of its task. The repeated bleedings and starvings, and the enforcement of the debilitating measures, are totally unsuited to the disease we are considering.

He specially condemns, in aortic valvular disease, with hypertrophy, the use of digitalis.

The paper by Dr Corrigan, on "Functional Derangements of the Heart," eleven years later, is equally judicious. Not having then seen Dr. C's. article, in a paper on this subject recently read before the *Society of Statistical Medicine*, and published in this Journal, we took occasion to dwell upon two or three points, under the impression that they were new. We are happy now, in justice, to acknowledge that we had been partially anticipated by this distinguished observer. The chief topics of his paper may be enumerated in his own words, as "functional derangement of the heart in growing persons"; those "dependent on gastric irritability"; "nervous palpitation, indicating permanent patency of the aorta"; "self-audible bruit"; and "epileptic palpitation." On the last topic, his observations, we believe, are quite original, and treat of some of those mild forms of epilepsy, attended with what the French term the *petit mal*, in which the palpitation and irritability of the heart are very troublesome.

It is well known that, among the large consumers of tobacco, the hysterical, bloodless females, and growing or dyspeptic males of our cities, a large proportion of cases of suspected heart-disease are simply functional.

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* *Maladies du Cœur.*

Dr. Corrigan, in his practical discrimination, has laid down several principles in their diagnosis, which have since been amplified by Canstatt* and Hughes.

Dr. Graves' *Clinical Lectures. Paper on Certain Affections of the Heart.*—We have not space to notice the paper on the "Influence of Position on the Pulse," and other contributions from this able and lamented teacher. We are also, accidentally, "just too late" to find in the city a copy of the second edition of his Clinical Lectures, which, we see by the many references of his surviving friends, contains much new matter on heart-disease.

In the first edition, which we have in hand, Dr. G. was one of the first to draw attention to a curious temporary enlargement of the thyroid gland, occurring, commonly, in nervous females, in connection with severe palpitation of the heart, commonly functional, and continuing many months. Dr. G. hints that the *globus hystericus* may depend on this. Sometimes it was accompanied by protrusion and staring of the eyeball. Dr. Stokes quotes his friend Dr. Graves on this subject, and adds in his new work, several illustrative cases. The thyroid enlargement, protrusion of the eyeball, and heart symptoms, generally spontaneously stopped after a year or more.

The paper to which we have above alluded is a capital piece of medical reasoning, based upon the record of six cases of cardiac disease, three of which were rheumatic pericarditis.

In the first of these latter, in addition to the usual signs of cardiac inflammation, there were at first two murmurs at the base and along the aorta; a *sawing, friction sound*, and, secondly, a musical murmur like that from rubbing glass with the moistened finger. On the second day, both merged into a "*leather creak.*" On post-mortem, the valves were healthy, but the pericardium was adherent at the apex, and the rest of the surface was coated with lymph. We had, recently, a similar case of a grating sound at the middle, and a musical sound at the apex, in a rheumatic patient under our care in the New-York Dispensary, which, however, were permanent for weeks.

Dr. G. remarks that, "in some cases of pericarditis, the heart's action becomes increased in strength for many hours before any sign of pericarditis can be detected."

In the fifth case, there was a loud, systolic bellows-murmur, simulating exactly that of aortic obstruction, in which it was found, after death, that the valves were perfectly healthy, and that the murmur

* *Handbuch der Medicinischen Klinik.*

depended on some dilatation and calcareous roughening of the ascending aorta.

The sixth case was interesting from an extraordinary vibratory thrill all over the chest, with a loud bellows-murmur, in a nervous little girl convalescent, which gradually subsided, without leaving any traces of organic disease.

Dr. O'Ferrall *on Mitral Disease.* 1843.—This interesting paper is based upon four anomalous fatal cases of valvular disease, located in the mitral alone complicated with hypertrophy and followed by dropsy, in three of which the usual sawing murmur of mitral regurgitation, heard previously at the apex, *permanently ceased* some time before death. In two of the cases, on post-mortem examination, there was adherent pericardium. In all there was some thickening about the mitral orifice, and the mystery of the temporary cessation of the valvular murmurs was explained by the *shortening* of one of the lamina of the mitral, having produced, so to speak, a *refitting* of the valve during the progress of the disease. After a few clear, practical reflections, he sums up with the following conclusions:

1st. That regurgitant disease of the nutral valve is attended by persistent murmur with the first sound.

2d. That the subsequent disappearance of this murmur does not lessen the value of the sign, nor contradict the diagnosis at the time it was made.

3d. That the order of phenomena here described, in *combination* with the general *symptoms* of the disease, constitutes a rational evidence of the supervention of contraction of the opening to a degree proportioned to the previous shortening of the valve.

4th. That uncomplicated obstruction of the aperture is not necessarily attended with a murmur.

5th. That the general symptoms of disease of the mitral valve are not to be distinguished from those of *softening*, merely by the presence of murmur, as has been asserted by authors.

6th. That the diagnosis can be made only by the observation that a well-marked systolic murmur had *previously* existed in *combination* with the general symptoms of the disease.

Dr. Leared *on the First Sound.* 1852.—Being simply ingeniously theoretical, Dr. L.'s paper requires, in this practical summary, but brief notice. It will probably, however, attract considerable attention in future discussions of the causes of the sounds of the heart.

In repeating the experiments of Williams, Hope and others, he became dissatisfied with their views of the causes of the first sound. By means of a hydraulic apparatus of India rubber, fitted with valves, and worked under water, he found that, by bringing a jet of water in mo-

tion against water at rest in the tube, he could produce a good imitation of a *bellows-murmur;* and if he used a more *viscid* fluid, like the blood consisting of molasses and water or gum-water, he could imitate the *first sound of the heart.* Hence, he inferred the latter to be caused to a great extent, by the shock of the column of blood in motion lifting the columns at rest in the aorta and pulmonary artery.

Dr. McDowell *on Dilatation.* 1852.—This instructive, well-written paper is based upon the careful relation of nine selected cases of heart-disease, mainly with excessive dilatation, and, in several instances, unaccompanied by valvular lesions. After many practical reflections upon the individual cases, he arrives at the following general conclusions:

1. Excessive dilatation is a direct and efficient cause of obstruction of the circulation.
2. It contrasts in this respect with hypertrophy, the benefits of which latter condition in valvular disease are often subsequently counteracted by progressive dilatation.
3. Dilatation may exist independently of diseased valves, and may produce general symptoms of obstructive valvular disease, or, when accompanied by softening, it may develop signs which specially indicate mitral contraction.
4. Dilatation may recur as a complication of all forms of valvular disease, modifying their signs, and producing an identity in the final symptoms of dissimilar diseases.
5. Hence, in valvular diseases, not essentially obstructive, when dilatation is superadded, the signs of obstruction become developed. The occurrence of pulmonary apoplexy and other phenomena of an obstructed circulation in aortic patency may thus in general be explained.
6. Atheromatous disease of the aorta causes obstruction from loss of elasticity of the vessel. Enlargement of the part may be thus induced, which, as dilatation becomes established, proves fatal, though the valves of the heart are free from disease.

Dr Bellingham's *Treatise.* 1853.—The work of Dr. B. is founded on the lectures delivered in St. Vincent's Hospital, and partially published some time since in the *Dublin Medical Press* and the *London Medical Gazette.* It is planned to consist of two parts:—First, a careful description of the anatomy, measurement, motion, and sounds of a healthy heart, followed by an account of the physical, general, and secondary or remote signs of cardiac disease. Only the first half, a neat octavo volume of 250 pages before us has yet appeared. The second volume is yet to be published. This last, we are promised, will be "devoted to the individual diseases of the heart, which are arranged according as their seat is the investing membrane, the lining mem-

brane, or the muscular tissue of the heart, followed by a description of functional or inorganic affections of the heart." As the work is yet incomplete, and the portion naturally the most interesting and practical is yet to appear, a very extended or elaborate review at present would perhaps hardly be just. Yet a few samples, some slight foreshadowings of what our readers may expect, may be welcome.

A very learned and extended description is given of the anatomy of the heart; better fitted, some will say, for a cyclopedia than a practical manual.

He gives the following judicious directions as to the mode of *opening the heart:*

The most simple and convenient method appears to me to be, to commence the incision in the pulmonary artery, carrying it through this vessel into the right ventricle, cutting between the sigmoid valves and continuing it to the apex, keeping close to the septum. A transverse incision, meeting the other about its centre, may then be made in the walls of the right ventricle. The aorta being next separated from the pulmonary artery, a similar incision is to be made through it into the left ventricle and continued to its apex, keeping close to the septum. This incision can then be continued on through the apex upon the posterior surface of the heart. To display the interior of the right auricle, a crucial incision may be made upon its anterior aspect, while the left auricle may be opened upon its posterior aspect, between the orifices of the opposite pulmonary viens.

The above differs but slightly, if memory serves us, from the process of the very dextrous assistants of Rokitansky.

With regard to the size and weight of the heart, he agrees with Bizot and Clendining, that the heart is naturally a trifle larger in the male than the female, averaging at middle age about 8½ ounces in the male; that in health it gradually increases in the male for life, and in females till 50 years, till at the maximum it may gain an ounce or two with age.

Our author has come out with a new theory to account for the sounds of the heart, in place of the more usual explanation given by Hope, Williams, Watson, and others. They believe, as we know, that the first sound, commencing with stretching of the auriclo-ventricular valves, is formed *mainly by the rumbling of muscular contraction*, aided sometimes by the tilting against the ribs, and that the short second sound is formed by the blood *recoiling upon the semilunar valves.* From the anologous sounds produced by an aneurismal sac without any valves, and from valvular murmurs being an exaggeration of the natural sounds by friction, Dr. Bellingham endeavors to prove that both sounds of the heart are produced by the friction of columns of blood.

The blood, compressed by the powerful muscular walls of the heart, during the systole and first sound, through narrow orifices, produces greater friction, and therefore more sound, which, he argues, must be "likewise more prolonged, because sound must be developed during the entire period that the blood is passing from the ventricle into the large arteries." He thinks that the blood falls from the auricles to the ventricles without propulsion, but in a full and rapid stream, and "with sufficient force" to generate the second sound.

The most interesting and practical portions of the volume are those describing the various signs of cardiac disease. We are glad to see a revival of attention to rational symptoms, believing that the recent great emphasis placed on the physical signs has led to some neglect of the former. The chapters on "palpitation," "the varieties presented by the pulse," "the countenance in heart disease," "congestion of the lungs, liver, and brain" and "cardiac dropsy," are excellent. The work is evidently the fruit of much research, and is especially rich in its abundant references to the literature of the subject.

Dr. Stokes' *Treatise.* 1854.—The work of Dr. Stokes is, we believe, the most voluminous ever published on the subject, being a large octavo of nearly seven hundred pages, very neatly printed. And we perceive that the Philadelphia publishers have reproduced a perfect fac simile of the Dublin edition, at a reduced price. As this great work is the latest, and, in some respects, the best treatise on this subject we now possess, we shall devote to it our remaining space.

In his preface Dr. S. frankly declares that, "omitting much that is new and interesting, his chief aim is to be practical; to dwell upon the refinements of pathology and diagnosis only, so far as they may be useful in every-day practice"; that, without being warped by any favorite theory, he simply seeks to record the results of clinical observations "for more than a quarter of a century," and the consequent "state of his own mind"; the conclusions which he thinks may be safely arrived at, and the doubts and difficulties he has been unable to solve or remove. The first hundred pages are devoted almost entirely to pericarditis. He divides it into 3 varieties as follows:

| First Form. | Second Form. | Third Form. |
|---|---|---|
| Absence of pain or local suffering frequent. No sign of muscular excitement, nor any special character of pulse. No increase of dulness over the heart. | The local and general symptoms more decided though often very trifling. Irregular action of the heart and pulse often more manifest in the advanced periods. Remarkable increase of dulness over the heart. | Local distress often extreme even at the outset. Tumultuous action of the heart. Irregularity of pulse. Dyspnœa. Orthopnœa. Œdematous swellings. Syncope, death. |

It is curious how much the heart may be compressed without ceasing to act. A friend of the reviewer, a highly intelligent Spanish physician, mentioned recently the case of a man with extensive effusion, under his care in the hospital at Caraccas, in whom life was feebly sustained some time, by a heart, which, after death, was found flattened like the hand.

Dr. S. quotes a case of his own, in which pericarditis attacked a heart displaced and compressed by pleuritic effusion, "without any injury or disturbance of the action of the organ," and another from Dr. Adams, "of long-continued pressure of the heart, so great as to fold up part of one ventricle, in which the heart endured this effect for a considerable time."

It is well known that Dr. Hope made somewhat of a bug-bear of adherent pericardium as inevitably causing hypertrophy. On this point Dr. S. remarks: "Without denying that a general adhesion may induce hypertrophy and dilatation, experience leads me to doubt that such an effect necessarily or even commonly follows the condition indicated. I have often found the heart in a perfectly natural condition, with the exception of an obliterated pericardium. It was neither hypertrophied nor atrophied." He cites a case of his own, of death from hepatic disease, in which the pericardium had been perfectly adherent from inflammation seven years previous, without any consequent change or disturbance. He further expresses his conviction that it is only where valvular disease accompanies or succeeds pericarditis, that enlargement necessarily follows; and refers to the statement of his friend, Prof. Smith, that he had indeed found atrophy of the heart, often attended with fatty degeneration or ossification, to be nearly as frequent a consequence of adherent pericardium as hypertrophy.

It will be remembered that, although M. Collin, as early as 1824, in a passing reference, stated that the "new leather sound," heard in two or three cases, would "perhaps prove a constant symptom of pericarditis," yet the honor of discovering the other "attrition-murmurs," and first clearly unraveling the whole subject, is now generally conceded, even by his competitors, to be due to Dr. Stokes, in his paper on this subject in the *Dublin Journal*, in 1833. Watson, Latham, and Bouillaud who shortly after unconsciously followed in the same track, in fact, simply confirmed his views by their valuable contributions.

With such high claims as a discoverer in the diagnosis of heart-disease, we are not surprised to find a great deal of interesting matter on this topic in his final elaborate work.

He enumerates, under different heads, as signs of pericarditis: 1.

Sense of friction on touching with the hand; 2. Friction-sounds or attrition-murmurs; 3. Extended dulness over the heart from effusion; 4. Friction-signs attended with or preceded by valvular murmurs; 5. Signs of eccentric pressure analogous to those of empyema; 6. Signs of excitement of the heart; 7. Signs of weakness or paralysis of the heart. These, he asserts, are varied by the state and extent of effused lymph; the existence of fluid; state of organization; obliteration of cavity; repetition of inflammation; air in the pericardium; distension of the stomach; complication with pleurisy; the force and volume of the heart; and, lastly, combination with valvular disease.

Speaking of the modifications of friction-sounds, he remarks:—

With the exception of the leather-creak sound of Collin, and some of the loudest rasping sounds, the friction phenomena are in general singularly localized, and are not heard beyond the actual region of the heart. In many instances, we find that, on removing the stethoscope but a single inch from the spot where the sound is loud, it totally ceases, though we still hear the ordinary sounds of cardiac pulsation.

As might be expected, we find the most intense friction-sounds under two conditions: one, a great degree of induration of lymph; and the other, a dry state of surface. * * * * *

In other cases, however, the sounds, though distinct, do not convey the idea of so unequal and resisting a surface, but resemble the rubbing together of two sheets of paper or parchment. In such cases the lymph will probably be found of soft consistence. And there is a third class of cases in which the friction-sounds are sometimes so soft, equable, and gentle, as to render it necessary that the patient should hold his breath for a few seconds, in order that we may fully observe them. Two circumstances having the effect of modifying these sounds must be here mentioned: one is the employment of antiphlogistic means, and the other is the trial of pressure over the heart. Nothing, indeed, can be more remarkable than the rapidity with which these signs are altered by the application of leeches over the heart, followed by a blister or a poultice. They change within a few hours even from the loudest rasp with distinct vibration to the hand, into a soft murmur, while the tactile signs disappear.

If, while the stethoscope is applied, we make downward pressure with the ear-piece, we shall often find a notable increase in the loudness and distinctness of the friction-sounds.

The work is full of such close, nice, practical observations; we have room but for here and there a brief sample.

A case is given and two others quoted from Drs. Graves and McDowell, of that rare and interesting phenomenon, *air in the pericardium* in connection with inflammation, and attended with a tympanitic sound of the cracked pot over the heart, large, loud, crepitating, and gurgling, mixed with attrition-sounds.

The influence of flatulent distension of the stomach in giving a *metallic* character to the sounds of pericarditis, as well as those of pneumonia, pleuritis, and bronchitis, is also noticed. He thinks Drs. Watson and Hope have overrated the frequency of valvular murmurs in pericarditis.

As a brief illustration of our author's clear, practical summing-up at the end of each important chapter, we copy the following on the connection of rheumatism with pericarditis:

1. That, though the combination of pericarditis with acute articular rheumatism is common, yet that disease of the heart is more closely related to rheumatic fever than to inflammation of the joints.
2. That the liability to pericarditis is in direct proportion to the violence and duration of the fever.
3. That in apyrexial cases of acute arthritis, the liability to cardiac inflammation is but slight.
4. That pericarditis may be developed at any period of the disease, and even precede arthritis.
5. That every variety and degree of pericarditis may occur in acute rheumatism, from the simple, dry, latent pericarditis, to the worst forms, combined with inflammation of the endocardium and muscular structure."

These statements very closely corroborate the views of Dr. Latham.

While giving a complete summary like the above, we think it a material omission not to state that cardiac inflammation from rheumatism is vastly more frequent in subjects under thirty than in middle or advanced age.

Our author's views of the treatment are admirable. He discountenances indiscriminate general bleeding, especially when a weak impulse or pulse forbid, and quotes Dr. Wood, of Philadelphia, in support of caution. He generally prefers relays of leeches over the heart, with intermediate warm poultices, aided by the prompt administration of calomel in from ten to twenty grain doses at long intervals, as recommended by Dr. Graves.

In the second stage he blisters freely. Digitalis he thinks *useless* in the early inflammatory stage; *beneficial*, sometimes, in the subsequent irritative period; and *dangerous* by encouraging syncope when the heart begins to fail in force. In the latter stage, with feeble pulse, faint or absent first sound, pallor, and œdema, he strongly advises wine and other stimulants, and thinks patients are often lost for want of them.

On the subject of endocarditis, he is comparatively brief. Pure, uncomplicated endocarditis he thinks exceedingly rare, and differs from Dr. Hope in the opinion that pericarditis without endocarditis is much the most common of the two.

Dr. Stokes places the combination and isolation of pericarditis and endocarditis, respectively, in the following order of frequency, commencing with the most numerous:—1. Pericarditis with endocarditis. 2. Pericarditis alone. 3. Endocarditis alone.

The following statistics of Dr. Latham, from Bartholomew's Hospital, give quite a different result from this:

In 90 cases of cardiac inflammation from rheumatism, there were of endocarditis alone, 63; pericarditis alone, 7; endocarditis and pericarditis combined, 11; doubtful, 9.*

After the late startling assertions and statistics of Dr. Taylor in favor of the view that cardiac inflammation was about as frequently connected with Bright's disease as rheumatism, we could have wished for something decisive from such high authority as Dr. Stokes. Only in the relation of two or three cases is albuminuria, without comment, casually mentioned as a symptom. But if there are a few points thus excluded, there are perfect mines of information on others.

On the subject of myocarditis he generally confirms the views of Hasse. Valvular lesions are in the main ably treated. The clear, terse definitions remind us of the style of Skoda, although, in many points, he disagrees with the Vienna professor. He doubts the truth of some of Skoda's nice distinctions in the diagnosis, and especially his statement that, in mitral obstruction, the second sound is accented over the pulmonic valves. The very rare affections of the valves of the right side of the heart naturally receive but brief notice; as Dr. S. justly observes, "in practical medicine we may confine ourselves to the diseases of the mitral and aortic valves." We cannot, however, much as we revere Dr. Stokes, in the honest love of medical truth, quite assent to the proposition, that it is unimportant to distinguish between the latter, and that "the number of cases in which it is desirable to determine the exact seat and nature of the affection is comparatively small."

According to the recent statistics of M. Forget, of Strasbourg, in round numbers, in about one-third of the cases both valves are affected, and the remaining two-thirds are nearly equally divided between the mitral and aortic valves, singly. If there is any difference in the prognosis or treatment from the large number involved, it is decidedly important to distinguish aortic from mitral affections.

Dr. Walshe arranges them in the following order, commencing with the most dangerous: "Mitral regurgitation and constriction, aortic regurgitation, and, last and least serious of all, aortic constriction."†

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* *Lectures.* † Practical Treatise.

The experience of the reviewer confirms this last statement. We had occasion to discuss the comparative prognosis a few weeks since, in a paper read before the *Society of Statistical Medicine*, in which we reported four cases of aortic disease with hypertrophy, in which the average duration had been some ten years. Usually, mitral disease is much more troublesome and extensive in its complications, involving the lungs, liver, and stomach, and often terminating speedily in dropsy; while purely aortic difficulties may remain stationary, occasionally for years,—may gradually wear the patient out, or complicate only the brain. The treatment is also different. Of course, such rules are liable to numerous exceptions.

Dr. S. has paid a high compliment to the great German authority in these matters, by translating and embodying an extract of some fourteen pages from the *Abhandlung der Perkussion und Auskultation* of Skoda.

Under the head of dilatation, he has given us a very interesting account of the case of his friend, the late Mr. Colles. During the last six years of the life of this eminent surgeon, he was subject, at intervals, to gouty attacks, accompanied with bronchitis, transient dyspnœa, palpitation, and other cardiac symptoms, finally giving rise to sudden enlargement of the liver with temporary suppression of urine, which were repeatedly relieved by mild mercurials, followed by diuretics and rest. During the worst of these paroxysms, "the impulse was feeble, irregular, and rapid, and the organ seemed to impinge over a large surface. So irregular and rapid was the action of the heart, that analysis of the sounds was a matter of great difficulty, the first occasionally resembling the second sound, and *vice versa*. There was no valvular murmur, nor any unusual thrill in the arteries." After some months of tolerable health, the liver was observed to be "permanently enlarged, forming a smooth flat tumor." This tumefaction rapidly increased with each paroxysm. No relief was ever obtained until, by mercury and diuretics, a free action of the kidneys was established. On a post-mortem examination at the generous request of Mr. Colles himself, the heart was found much larger than natural, in a state of "great passive dilatation," the orifices "natural," and the muscular substance loaded with fat, "pale, soft, greasy, and easily ruptured"; "globules of oil floated upon the surface of the blood." The liver "not much enlarged," presented a dull mahogany color, a tumid, swollen aspect, and a rough granular surface. Except the globules of oil floating on the blood after incision, the kidneys were apparently healthy.

Eight other cases of "fatty heart" are minutely recorded. The average age was 61. Of the eight cases, three had the characteristic slow pulse, and three the pseudo-apoplexy; two had rupture, and two free oil in their blood. In the treatment of these cases of weak "fatty heart," he advises the giving up of all luxurious habits; moderate, persevering gymnastic or pedestrian exercise; cold, shower-bath, with frictions; for diet, to eat temperately of lean flesh, avoiding fluids, except water; the use of wine or brandy at meals, and the free resort to these stimulants in attacks of fainting and pseudo-apoplexy.

The description of the more active and pure hypertrophy of the heart not connected with great weakness and dilatation, is rather meagre.

In regard to the treatment of hypertrophy, there are some very judicious observations. With Dr. Latham, he discourages Hope's plan of repeated bleeding, from the arm for fear of anemia; cupping he thinks often objectionable, from the excitement of the operation; but prefers, when necessary, applying small numbers of leeches over the heart, from time to time, stating that, when not pushed too far, they sometimes effect great improvement. He speaks doubtfully of setons and issues, as also of the endermic use of digitalis, as recommended by Bouillaud;* but commends the cautious use of small blisters, and anodyne applications, and the internal exhibition of digitalis or hydrocyanic acid.

One of the most interesting chapters in the book is that devoted to the condition of the heart in typhus fever, comprising nearly a hundred pages. On this subject, it will be remembered, Dr. Stokes was the pioneer many years since. In the present volume, he has minutely recorded no less than thirty-one illustrative cases.

They exhibited in many instances the peculiar sign, first pointed out by Dr. Stokes, as indicating softening of the heart, and the special need of wine and active stimulants in typhus; the *loss of impulse*, even when the patient was turned on the left side, and the *partial or total suppression of the first sound of the heart.* Of these 31 cases, the impulse was feeble or absent in 14; the first sound of the heart obliterated in 5; and feeble in 14 instances.

Out of these 31 cases, 11 died; and in 9 of those fatal, on post-mortem, there was found *softening* of the muscular substance of the heart, usually most decided in the left ventricle, and sometimes confined to that locality.

Dr. Stokes also discovered a group of cases of typhus, mild in char-

* Maladies du Cœur.

acter, with little or no petechial eruption *specially liable to relapse;* with no evidences of softening, and little or no necessity for wine; in which a soft systolic *bellows-murmur*, like that in chlorosis, or a prolongation of the first sound, was distinctly heard. Of the above 31 cases, 7 were of this mild "relapsing fever," with the first sound changed to a bellows-murmur, or lengthened.

In some of the above cases, the heart was over-excited, and had increased impulse, and perhaps, at the same time, a weak pulse. These cases all seemed either injured, or not benefited, by wine. They were generally fatal, and exhibited no appearances of softening.

It is only in the third class, or where the impulse and first sound of the heart are feeble, or obliterated, that he so strongly recommends wine and corresponding stimulants. He thinks *improvement* of these signs after the exhibition of wine, in these grave cases, of much value, as indicating a favorable prognosis.

An interesting chapter is given on displacement of the heart. Among the varieties enumerated, are those from pleuritic effusion, penumothorax, emphysema, cancerous tumor, aneurism, diaphragmatic hernia, tubercular disease, and atrophy of the lung.

As a frequent cause of that rare occurrence, rupture of the walls of the heart, he naturally mentions the fatty softening sometimes found in the cachectic or aged. Rarely, as we know, it has occurred from violence and other causes.

Several cases of rupture of the valves and chordæ tendinæ, are also given. He thinks that angina pectoris is generally connected with organic disease of the heart or arteries; that there is commonly "some form of weakened heart," and that, therefore, *stimulants* are always indicated.

On the subject of functional derangement of the heart, there are many valuable practical observations. But we have already much exceeded our proposed limit, and must close by simply giving his classification. He separately treats of "Increased action in young and growing persons;" "palpitation from derangement of the stomach;" from "hysteria;" from "gout and rheumatism;" and cardiac suffering from the abuse of "tea," and "tobacco." We close Dr. Stokes' volume with the conviction that it is the best of his many learned and practical contributions to medical science, and worthy of his previous high fame; and that, while it does not profess to be a compendious or complete text-book for beginners, it must long remain one of the most valuable works of reference on the subject, in any language.

In conclusion, we may mention, that want of space has prevented us

from noticing the contributions of Townsend, Ledwich, Todd, Lees, Houston, McDonell, and others, or the valuable records of the Dublin Pathological Society, illustrative of this important subject.

We fear, indeed, we may have already wearied our readers with this sudden fancy for medical mosaic. If the setting has been unskilful, we have the consolation of believing that the stones are all precious gems. J. W. C.

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## BIBLIOGRAPHICAL NOTICES.

ART. XI.—*Woman: Her Diseases and Remedies.* A Series of Letters to his Class. By CHARLES D. MEIGS, M.D., Professor of Midwifery, and the Diseases of Women and Children, in the Jefferson Medical College at Philadelphia, &c., &c. Third Edition, revised and enlarged. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 672.

THIS is a third and revised edition of Dr. Meigs' Letters on the Diseases of Women. As the merits of this work are very well known in this country, it is necessary for us merely to call attention to the issue of a new edition.

ART. XII.—*The Science and Art of Surgery. Being a Treatise on Surgical Injuries, Diseases, and Operations.* By JOHN ERICHSEN, Professor of Surgery in University College, &c., &c. Edited by JOHN H. BRINTON, M. D. Illustrated by three hundred and eleven engravings on wood. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 908.

THE work of Mr. Erichsen belongs to a class of surgical publications which have become quite popular latterly, and which are at once very readable and instructive. We refer to the system of publishing the lectures which the author may have delivered upon a special subject. To this class belong the recent works of B. Cooper, Skey, Perrie, &c., &c. We have in this volume the lectures which Mr. Erichsen has been accustomed to repeat to the students of University College, London, and we regard it as the best and most complete of all similar works. Every subject is carefully and accurately investigated—first, in regard to the science, and then the art of surgery. No surgical treatise is, therefore, better adapted than this to give satisfaction to the general practitioner. It is very fully illustrated.

ART. XIII.—*Comparative Anatomy.* By C. TH. VON SIEBOLD and H. STANNIUS. Translated from the German, and Edited, with Notes and Additions recording the recent progress of the science, by WALDO I. BURNETT, M.D. Volume I. Boston: Gould & Lincoln, 1854. 8vo., pp. 470.

IT gives us great pleasure to call the attention of that class of our

readers who devote time to the study of comparative anatomy to this work of Siebold, now reproduced in plain and unexceptionable English by Dr. Burnett. It is a work of great labor, and has been justly esteemed one of the most complete treatises of its kind in any language. The Editor thus notices its distinctive features: "In the text will be found a lucid yet succinct exposition of the anatomical structure of organs, arranged, as far as practicable, under distinct types. The details on which this typical summary is based, are comprised in notes which are as remarkable for their erudition as for their copiousness: indeed, the utmost care has been taken in the literature of the various subjects treated, and the student will here find the most reliable, and, at the same time, the fullest reference to the bibliography of nearly every subject in Comparative Anatomy." The work thus furnishes a complete dictionary of the science, and is invaluable either for careful study or as a book of reference. The additions of Dr. Burnett to the notes and bibliography are extensive and valuable. The mechanical execution of the work is in the best style of the art, and reflects creditably upon the publishers.

ART. XIV.—*Clinical Lectures on Pulmonary Consumption.* By THEOPHILUS THOMPSON, M.D., F.R.S., Physician to the Hospital for Consumption and Diseases of the Chest, London, &c. Philadelphia: Lindsay & Blakiston, 1854. pp. 258.

THIS is a neat edition of the lectures, thirteen in number, which the author delivered at the Brompton Hospital for Consumption, in 1851, and which were published in the *Lancet* for that year. They attracted considerable attention at the time, from the author's investigation of the red streak upon the gums in phthisis. As physician to a large hospital, devoted especially to this single disease, the author has had the most ample opportunities to study Consumption in all its phases, and he seems to have improved his advantages diligently. The work is not a complete treatise on phthisis, but, maintaining the form of lectures, each subject is treated in the discursive but attractive style of clinical teaching, with an ample and appropriate introduction of cases. We shall recur to it again.

ART. XV.—*Handbook of Chemistry, Theoretical, Practical, and Technical.* By F. A. ABEL, Professor of Chemistry at the Royal Military Academy, Woolwich, and C. L. BLOXAM, formerly first Assistant to the Royal College of Chemistry. With a Preface by DR. HOFMANN: and numerous illustrations on wood. Philadelphia: Blanchard & Lea, 1854. 8vo., pp. 681.

WE find this volume, after a careful examination, admirably calculated to smooth the path of the student in every department of chemical analysis. It gives a concise account of general chemistry, as far as it is involved in the operations of the laboratory; as well, also, qualitative and quantitative analysis. It goes forth under the sanction of Prof. Hofmann, and we feel certain will prove a useful guide to the student of chemistry.

# PART THIRD.

# FOREIGN MEDICAL RETROSPECT.

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## PRACTICAL MEDICINE.

*A Review of Reports on Epidemic Cholera, drawn up at the desire of the Cholera Committee of the Royal College of Physicians.* By Wm. Baly, M.D., and Wm. W. Gull, M.D., 8vo, London. The Report of the Royal College of Physicians has long been anxiously expected by the profession and by the public; and, although it has at last appeared, and although its preparation does infinite credit to the distinguished authors whose names appear upon the title-page, we predict that it will disappoint the expectations of the reader who seeks in it for a solution of his doubts, and a clear indication for his practice. Its style is analytical, and it carefully collects the information derived from various sources, testing the value of theoretical views by appeal to established facts; and when conclusions are drawn at all, they are fairly warranted by the arguments which precede them. So voluminous are the materials of which the authors have made use, and so numerous are the facts and arguments which they have condensed into the present volume, that we feel considerable difficulty in presenting a tolerable analysis of the book in our pages; and, in order to be within limits, our remarks must be, necessarily, discursive.

It must, however, have struck every one who has studied the works written on cholera, or has witnessed the actual progress of the disease, that certain questions stood prominently forward for discussion by the members of the profession, and that the answers to such questions involved points of immense importance, not only to individuals but to whole nations, and to the world itself. For this fearful pestilence has spared neither sex, nor age, nor calling; it has swept off both high and low; the expanse of the ocean has not limited its progress, nor have adverse winds repelled its march or diminished its virulence; and some of the coldest as well as the hottest regions of the globe have suffered alike from its visitation. It is, therefore, of immeasurable interest to the statesman, the philosopher, and the philanthropist, as well as to the practitioner of medicine, to trace, if possible, the hidden springs of so much misery to the human race; to discover the latent poison, and to counteract its influence; or, when it has burst forth in the community, to check its ravages and prevent its propagation.

The questions, then, which require solution, are: the cause of cholera, and the mode of its diffusion; the morbid anatomy and pathology of the disease; and, lastly, its treatment.

In the Report now before us, the two first questions are discussed by Dr. BALY, the three latter by Dr. GULL. In addition to the letter-press, there are numerous laboriously-executed maps, showing the progress of the disease, and its relative mortality at different places and different times; and also copious tables, drawn up as the results of the answers obtained by the Cholera Committee to the circular letters addressed to the profession in the year 1849.

In Dr. Baly's contribution to the volume, on the CAUSE OF CHOLERA and its MODE OF DIFFUSION, he considers first the different theories which have been advanced upon the subject, and then, before treating them in detail, he advances a great variety of facts and arguments to prove the general characters presented by the cholera epidemic.

The first of these characters is, *the unequal and very partial distribution of the epidemic*, which presents a remarkable contrast to epidemic influenza, which has, at one time, involved the whole of Great Britain and all Europe, while cholera fallen severely on comparatively few localities. This latter fact is proved from the statistics of Mr. Farr, who shows that four-fifths of the deaths from cholera in England and Wales during the year 1849 occurred in 134 registration districts, the total number of districts being 623, while there were 85 districts in which no death was caused by cholera.

The second character of a cholera epidemic is, that *the localities especially, and most severely, visited by it, have certain features by which they are distinguished from those other places which entirely escape, or suffer only in a slight degree.* This feature of the disease is, perhaps, better known and more generally admitted than any other; and abundant experience has shown that low-lying districts, in the vicinity of rivers or of the sea, and which are unclean and ill-ventilated, are far more liable to the attacks of the disease, than those places in which the circumstances are reversed. But even to this generally-received law there were several exceptions: for, in the epidemic of 1849, "three sea-ports, Lynn, Deal, and Scarborough, almost entirely escaped, and many large inland towns, certainly crowded, and in a more or less defective sanitary condition, had very few deaths." Again, we are told that Reading, where only seventeen deaths from cholera occured out of a population of about 20,000, is described as "built upon a bog, surrounded by water-meadows, with the Thames on one side, a canal on the other, the atmosphere remarkably humid," and as "by no means in a sanitary condition as to drainage and the like." Stafford, where there were only three deaths from cholera, is said by a local physician to be "very low"; "to have numerous stagnant drains in its immediate neighborhood"; "the river impounded by hills so as to be above the level of the surrounding lands"; "floods frequent and long-continued"; and that "the most favorable conditions for the attack of cholera exist within the town, there being no sewers, much filth on the surface, slaughter-houses, pig-sties, etc."

Reading and Stafford, however, are only exceptions to a general rule; and not only is it found that low-lying and humid districts are more exposed to the disease than lofty and dry situations, but that, even in the same town and the same street, the visit is modified by the elevation of above the soil and other local peculiarities. It is found that in London an inverse relation subsists between the elevation of the soil and the mortality from cholera, is proved by Mr. Farr's statistics; and a table is given in Dr. Baly's Report, showing the relative mortality, in 1849, in 10,000 inhabitants in different districts of the metropolis, lying at different elevations above high-water mark. Thus it is found that in Rotherhithe, where the soil is on a level with the high-water mark, the deaths were 205 in 10,000; while in Hanover-Square, where the soil is forty-nine feet above high-water mark, the deaths were only eight in the same number.

The third character of a cholera epidemic is *its long duration in a country, or even in a town of large size*, a feature in which it again differs from influenza, the duration of which is very short, not exceeding a few weeks in a town, and two or three months in a whole country. Now, as the duration of the epidemic has been found to be uninfluenced by varying states of the atmosphere, it cannot be proved that the winds have brought the disease or that these agents have carried it away, but it seems to linger among the inhabitants of towns and cities by some inherent power of reproduction. Dr. Baly therefore proposes that the explanation of the long continuance of the disease in the localities which it visits, is to be found in the theory of "its dependence on a morbific *matter*, transportable within limits from place to place by the atmosphere, and capable of increase under favorable conditions in the places to which it is conveyed. For there is no difficulty in supposing that such a matter might attach itself to the surface of bodies within these places, so as to remain fixed there and even to increase, as long as the favoring conditions continued, quite independently of subsequent changes in the direction of the wind, or, in other words, of subsequent movements and changes of the great mass of the atmosphere."

The fourth character of cholera is that *the intensity of an epidemic of the disease varies during its continuance in a country or a large city;* so that *it has periods of little and of great activity, and usually well-marked periods of increase, acme, and decrease.* It is generally found that cholera appears in summer, and attains it greatest intensity in the summer or autumn; but this is by no means universally the case, nor does it appear the severity of the disease is at all in proportion to the elevation of the temperature at any given period; for even when the disease has raged during the summer, its greatest intensity is by no means contemporaneous with the greatest heat. In the fatal year 1849, for instance, the greatest heat was in the month of July, but the disease reached its greatest intensity in the month of September, when the temperature was considerably lower. These facts are well shown in a diagram in the body of the work, in which the exact temperature of each day is shown, as well as the relative amount of cholera prevailing at the same time; but the general rule is not invali-

dated, that the disease is usually more destructive in the hotter than in the colder months; and it would farther appear that great stillness of the air promotes the spread of the disease, while strong currents have an opposite effect.

A fifth character of the disease is, *that after a certain time it altogether disappears;* a fact which is well known to all who have studied its phenomena, but one for which it is difficult to afford any satisfactory explanation.

The sixth character of the disease which Dr. Baly investigates, is *the manner of its dissemination as regards time; that is to say, the degree in which its appearance, its period of greatest intensity, and its cessation were severally simultaneous in different places.* After a careful examination of the statistics bearing upon these points, the results are found to be that, in 1849, different towns began to be affected in succession, and not simultaneously; and that the towns first affected were generally those which lay on the sea or on rivers, and in which the population was dense and poor, and the habitations crowded, ill-built and ill-ventilated. The facts have shown that the epidemic of 1848–49 was very widely spread over this country within three months after its first appearance, at the end of September, that the increase of the epidemic at the beginning of the summer of 1849 took place in different counties in June, July, and August, and its ultimate cessation in September, October, or November; and that although the sanitary circumstances already adduced were found to influence the persistence of the disease in most cases, yet in numerous exceptional instances, the times of the commencement and of the cessation of the epidemic were not accounted for by site, population, or sanitary conditions. We regret that our space will not permit us to follow Dr. Baly through the voluminous details on which he has founded his opinions, or to record the conflicting and apparently contradictory facts, which, as reporter to the Cholera Committee, he has been called upon to examine, and, if possible, to reconcile with one another.

On the important question of the *contagious* or *non-contagious nature of cholera*, the evidence, as is well known, is hitherto unsatisfactory; but it would appear, on the whole, that the weight of proof leans to the side of the non-contagionists. "Amongst the eighty-four communications" says Dr. Baly, "relative to this topic, there are thirty-two in which the writers either distinctly maintain that the disease is not contagious or infectious, or evidently lean to the adoption of that view, and seven in which the contagious or infectious nature of the disease is asserted in an unqualified manner." Dr. Baly, however, analyses the evidence on both sides with great impartiality, but finally arrives at the conclusion that the contagious nature of cholera is not yet proved. It certainly does not appear that the nurses of the sick, or those who have buried the patients, or the medical men who have made *post-mortem* examinations, have suffered in proportion to the danger which they must have incurred; nor is it proved by facts that the persons who have washed the bedding and foul linen of cholera patients have caught the disease, at any rate, in great numbers. In some hospitals, however, as in St. Thomas's and in King's College,

the disease appears to have been communicated to the attendants by the patients; in the former hospital, there were one hundred and forty-seven cholera patients, and three nurses were attacked; in the latter, there were one hundred and twenty-three patients suffering from cholera, and two nurses died of the disease. Admitting, however, that contagion may be proved to a limited extent, "human intercourse" says Dr. Baly, "is certainly only one cause of the propagation of the disease. The general features of the epidemic of 1849, and special facts, also, have afforded satisfactory evidence that some other agent is engaged in its diffusion." Dr. Baly then proceeds to examine and to criticise the opinions of those who have proposed other theories for the propagation of the disease, and he considers first, the question whether the cholera poison is carried by the wind, or whether, as Dr. Snow supposes, it is transmitted from one human being to another by the drinking water. Both of these views are argued at great length, but are finally set aside as unsatisfactory. Dr. Baly considers that the influence of atmospheric currents is chiefly exerted in spreading the disease through the different parts of towns and over limited tracts of country, but that the agency of winds does not sufficiently account for the passage of cholera across the seas. He thinks, indeed, that, unless in very rare instances, the poison is not carried long distances by the winds without the loss of its morbific properties.

All the causes, therefore, assigned for the propagation of cholera are insufficient, when taken singly, to account for the results which are most probably to be explained by a modification and combination of some of the theories hitherto proposed; and as the disease is undoubtedly encouraged by damp and foul air, crowded and ill-ventilated dwellings, and habits of intemperance and personal uncleanness, Dr. Baly concludes his Report by some remarks upon Sanitary and Preventive Measures; but although this part of the work is quite unobjectionable, and embodies some very wholesome instructions, the length of our previous notices and extracts prevents us from doing more than giving them a passing allusion.

A copious Appendix is added to Dr. Baly's Report, giving a vast amount of information, upon many practical details, of the last great cholera visitation. In those places which were severely attacked, as well as in those where the mortality was small, the names of the locality and of the reporter are given, together with the number of deaths, the character of the site and its sanitary condition; in another table, the state of the wind and the mortality from cholera are compared, from observations made in Paris from the 19th of March to the 30th of September, 1849; in another are shown the monthly mortality from cholera, and the average temperature in the corresponding months in several epidemics in several cities and towns; another shows the distribution of cholera and diarrhœa over the Devonshire and Cornwall "Cholera field"; another, its distribution over the infected districts of Worcestershire, Staffordshire, and Shropshire; and another gives abstracts of communications received by the Cholera Committee relative to the sanitary condition and general characters of the localities in which the disease first appeared. In these tables the quantity of details

is enormous, the labor involved in their compilation and arrangement is incalculable, and the whole forms an enduring monument to Dr. Baly's patience and industry.

In Dr. GULL's Report upon the Morbid Anatomy, Pathology, and Treatment of Cholera, the reporter commences by stating, in his address to the President of the College of Physicians, that he does not intend to write an essay upon the disease; that the section on Treatment contains little that is positive, and that, as the report was undertaken after the disease had begun to decline, there was no opportunity for original inquiry.

Among the first subjects noticed is the fact of the rise of temperature which has been observed after death in cholera; a circumstance which attracted attention during the epidemic of 1832–33, but which was not supported by accurate thermometrical details. In the cases now recorded, it is proved that the temperature really rose after death; in one case, the temperature in the axilla, ten minutes before death, was 103·1°; five minutes after death it was 104°; in another case, twenty-five minutes after death, the temperature of the uncovered abdomen was 89°, forty-five minutes after death it was 90°, and fifty minutes after death it was 91°.

Another point adverted to is, the existence of muscular contractions after death, which often occur to a great extent and last for a long period.

In the cases of those who died during collapse, the stomach was found pale, and contained fluid of various colors and character; the coats of the small intestines were thickened and pulpy from œdema of the mucous membrane and submucous tissue; the villi were swollen and prominent from œdema; the patches of Peyer were often thickened and prominent from infiltration of serous fluid; the large intestine was more rarely affected with hyperæmia and ecchymosis than the small intestine; the liver was generally diminished in bulk, and its tissue flaccid; the gall-bladder was often distended with dark bile; the kidneys were usually congested; the female generative organs were likewise often congested.

When death occurred during reaction, the mucous membrane of the stomach and small intestines presented few alterations of importance; but the kidneys were frequently enlarged, the structure coarse, and presenting traces of congestion. The morbid appearances are then described in a systematic manner, and the analysis occupies forty-nine pages, detailing, in a series of cases, the sex and age of each patient, the duration of severe symptoms, and the lesions exhibited respectively in the stomach, the small intestines, the large intestines, the solitary and the aggregate intestinal glands, the mesenteric glands, the spleen, the liver, the gall-bladder, the peritonæum, the kidneys and urinary passages, the female sexual organs, the heart, the lungs, the membranes, substances and ventricles of the brain. This part of the Report is a most laborious but useful compilation, and affords an excellent view of the morbid appearances in cholera.

Although certain symptoms have been described by authors as the prodromata of the disease, Dr. Gull thinks that little dependence is

to be placed upon them. Those which have been chiefly enumerated are vertigo, headache, giddiness, general *malaise*, muscular fatigue, faintings, cramps, nausea, etc.; but Dr. Gull remarks that many of them arise from mental emotion, and others are not so much premonitory of an attack as the first symptoms of its onset.

With regard to the existence of premonitory diarrhœa, the information conveyed to the reporters is unsatisfactory, one set of answers asserting the frequency of this symptom, and another set denying its uniform or general occurrence.

In answer to the question whether the premonitory diarrhœa was characteristic of the severer disease, Dr. Gull observes, that "the diarrhœa premonitory of the severer symptoms of cholera was often feculent and bilious, and presented no characteristics whereby it could be certainly distinguished from other forms. There were, however, occasionally some subordinate points of slight diagnostic value. The evacuations were generally more profuse and liquid than usual, but otherwise of a natural appearance, often unacompanied by pain, and passed without effort, the painlessness and passiveness giving a false security to the patient. It was not until the nervous system began to be depressed, and the feculent character of the stools was lessened or lost, and they became alkaline, watery, and flocculent, that they were distinctive. On this point, the experience of the profession appears to be uniform, and hence we may draw the following important conclusion:—that during the prevalence of the epidemic, every case of diarrhœa, arising without obvious cause, may be regarded as a probable result of the specific poison."

When the patient has passed through the stage of collapse in cholera, he has other dangers to encounter; and when the system is much enfeebled by the violence of the disease, the reaction is often imperfect, and the recovery doubtful. The hot stage of cholera—the consecutive fever, as it is popularly called—has its peculiar sources of danger. Important pathological conditions are presented by the kidneys. "Not only are these organs, in the first stage, occasionally subject to the cholera-process, but, from the complexity of their circulation, the state of the blood, and the depressed nervous power of the ganglionic system, they slowly recover their function, and, from the persistent congestion, the secreting structures undergo changes similar to those found in acute albuminuria from other causes." The urinary secretion was either entirely suppressed or very scanty, of low specific gravity, and contained albumen. It appears, however, that the lesions of the kidneys in cholera did not lead to permanent changes of structure, and that if the patients recovered, the urine soon ceased to exhibit traces of albumen. We learn, also, from statistics, that the greatest mortality was during the stage of collapse or imperfect reaction, and that not more than one-tenth of the cases perished in the consecutive fever.

Dr. Gull does not attach much importance to the so-called cholera-exanthem, which is not of frequent occurrence; and, when it happens, he regards it as being of subordinate pathological interest, and as closely allied to urticaria febrilis and erythema papulatum.

Although it is generally believed that the weak and diseased mem-

bers of the community are peculiarly liable to the attacks of the epidemic, such does not appear to be exactly the case, for chronic lesions were rarely found in the bodies of those who died of cholera. In eighty-nine cases of cholera examined by Dr. W. T. Gairdner, the liver presented evidences of chronic diseases but once, the kidneys only in four cases, and the intestines were uniformly free. Of the physicians' patients in five London hospitals, from June 1st to November 1st, 1849, 934 were in St. Bartholomew's, and none were attacked with cholera; 998 in St. Thomas's, and six were attacked; 913 in Guy's, of whom three were attacked; and 640 in St. George's, of whom only one was attacked.

Upon the influence of habits and occupations as predisposing to cholera, the Report gives some interesting details. The most fertile cause which invites the disease is intemperance; and, in the communications forwarded to the College, it is clearly shown how great an effect this vice has in disseminating, and, perhaps, in generating, the cholera poison; not only does it appear that habitual intoxication renders up its votaries as the victims to the pestilence, but even the depression resulting from occasional excess had apparently a marked predisposing influence.

As to the liability of certain professions and occupations to the attacks of the disease, the results of Dr. Guy are quoted, and, from his investigations, it appears that "cholera was least fatal to persons occupied in the learned professions, not excepting general practitioners in medicine. It was in an equally low ratio to undertakers. Footmen and other men-servants appear to have been highly favored, probably from the part of the town in which they are principally employed, and the great care they take of themselves, being, perhaps, less exposed to fatigue, either bodily or mentally, than any other class: hence we are not surprised that, whilst among physicians, surgeons, and general practitioners of medicine, the mortality was 1 to 265, amongst footmen and other men-servants it was but 1 to 1572. Amongst tradesmen there are too many discrepancies to admit of any general deductions. Amongst common laborers the mortality was high, especially to ballast-heavers, coal-porters, and scavengers."

It is found from statistics that the Jews enjoyed a remarkable immunity from the disease—a circumstance which seems to be due to their attention to hygienic rules. "Their houses are cleansed annually, and are not overcrowded. They are, as a class, sober, and in their diet scrupulous. There is no extreme destitution among them, the wealthy classes relieving those in distress. Their Sabbath is rigidly observed as a day of rest."

On the all-important subject of the Treatment of Cholera, Dr. Gull's remarks are copious, but the results are unsatisfactory. Among the principal medicines employed was calomel; but Dr. Gull states that it is administered only on empirical grounds, and that there appears to be no argument in favor of its exhibition, either from analogy or from pathology. The absence of bile from the evacuations is merely a subordinate result. Dr. Gull thinks that the beneficial results of the calomel treatment have been overrated by its advocates. This is decidedly our own opinion.

The treatment by calomel, opium, and stimulants, has been termed the "rational" method. The calomel was given to restore the functions of the liver; the opium, to allay irritation and arrest the discharges; and the stimuli, to counteract the depression of the nervous system: but experience did not confirm this theory, and the results were unfavorable. Great expectations were excited by the discovery of chloroform, but its specific efficacy in cholera has not been proved. It sometimes allayed the vomitings and cramps, but did not arrest the progress of the malady.

Quinine, strychnia, arsenic, sesquichloride of iron, nitrate of silver, nitrous acid, chlorine, sulphur, sulphuric acid, have all been tried; and some of them, when used upon rational principles, are most valuable in the treatment of cholera.

The application of heat by means of the hot bath, the vapor bath, and the hot-air bath, appears to be of little value in collapse. Cold affusion has produced results not more satisfactory than those from the hot bath. The "wet sheet," in the milder cases, favored reaction, but, when the disease was severe, it was useless or injurious. "In none of the cases, which were many," says Dr. Gull, "in which we saw it tried, did it produce any good effect."

In a few cases, oxygen was inhaled in the stage of collapse, with asphyxia; and, at the same time, galvanism was employed to stimulate respiration, but no permanently favorable effect was produced by these means in the majority of cases.

The injection of saline matter into the veins was practised in 1832–33, without good results; and the repetition of the experiment in the last epidemic was not more satisfactory. Nevertheless, Dr. Gull considers that this plan deserves a further trial, taking such additional precautions as previous failure has suggested, and as the present state of physiological science may indicate. Dr. Gull gives the following observations on this subject:—"An accurate determination of the amount (of fluid) to be employed at one injection is difficult. This must be arrived at by a consideration of the previous history of the case, and by the effects produced. In general, too, great anxiety has been manifested to witness immediate and striking results; and some have probably fallen victims to a large amount of fluid suddenly thrown into an enfeebled circulatory system, whereby the lungs and brain have become seriously embarrassed. In an adult, probably not more than from forty to sixty ounces should be injected without intermission. The operation may be repeated after a longer or shorter interval, according to the necessities of the case; and this is, for the most part, to be preferred to throwing in double the quantity at once. Cases have terminated successfully where such an amount of injection has been repeated five or six times. Our physiological knowledge of the constitution of the blood shows the importance of the saline fluid being slowly mixed with it, otherwise a serious injury may be inflicted upon its organic constitution. From the data afforded by successful cases, we may conclude that about two to three ounces per minute may be set down as the mean rate."—*Assoc. Med. Jour.*

*On a peculiar epidemic Fever, with Scarlet Eruption.* By EDWARD GOODEVE, M.D. (*India Annals of Medical Science.*)—A peculiar fever with scarlet eruption prevailed in Calcutta and other parts of Bengal in 1824, and was described by Twining, Mouat, and others. In 1847, a similar fever was seen, and was recorded by Dr. H. Goodeve. The fever now described by Dr. E. Goodeve appeared to be of a similar kind. The symptoms set in suddenly with shivering, and fever, which was generally paroxysmal; each paroxysm lasted from two to fourteen hours, being followed by a remission of variable duration. A bright scarlet eruption rapidly followed the initiatory symptoms, being in six cases visible within twenty-four hours, and in two cases appearing in the first febrile paroxysm. It was first seen on the upper part of the neck, the face up to the scalp, and the upper part of the thorax; it then extended to, but was always fainter in, the upper extremities; it seldom extended to the abdomen or the lower extremities. In color, this eruption varied from bright red to a faint rose hue. It was occasionally slightly papular, and was obliterated on pressure. Its duration varied from forty-eight hours to six days; it was seldom followed by desquamation. The mucous membrane of the mouth and throat, and in some cases of the nose, was involved; there was redness, follicular enlargement, swelling of the tonsils, and sometimes, but rarely, ulceration. There was, occasionally, catarrh and congestion of the bronchial mucous membrane; sometimes there was catarrh of the alimentary mucous membrane; the urine was albuminous in one case.

This fever differed from those previously recorded, in two important particulars: first, in the decided implication of the mucous membrane of the mouth and throat; and secondly, in the almost entire absence of articular symptoms, which, in former epidemics, have been so marked as to lead Dr. Copland to describe this disease in his Dictionary under the term, "Scarlatina rheumatica." Only in one of the twenty-eight cases did these joint symptoms occur.

With respect to the identity of this disease with the European scarlatina, Dr. Goodeve hesitates to draw a conclusion, although he recapitulates the striking symptoms, and observes that they are the same as those which go to make up scarlatina.

The mortality was not great; only one case in twenty-eight was fatal. The treatment was simple.—*Med. Chir. Rev.*

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*Six Analyses of the Blood in Typhus Fever.* By MM. GUENAUD DE MUSSY and RODIER. (*Becquerel and Rodier's Path. Chem.*)—In 1847 M. Henri Guenaud de Mussy and M. Rodier were commissioned by the French Government to enter upon an investigation of the typhus fever, which at this time was committing great ravages in Ireland. The former took charge of the pathological department, the latter was occupied with an analysis of the blood. A complete work on this disease was to have been published, but circumstances have decided otherwise, and it is probable that this work will never see the light; one of us, however, has preserved the analysis of the blood of six patients affected with typhus fever, which we believe we ought to publish here in the hope that they may be of some use in the history of this disease.

*Analysis of* 1000 *grammes of Blood.*

| | 1. Man. | 2. Man. | 3. Man. | 4. Man. | 5. Woman | 6. Woman. |
|---|---|---|---|---|---|---|
| Density of the blood, . | 1055·5 | 1047·0 | 1050·9 | 1042·1 | 1051·2 | 1041·2 |
| Globules, . . . . . | 146·5 | 113·5 | 138·1 | 97·2 | 126·8 | 95·6 |
| Solid parts of the serum | 75·4 | 71·1 | 60·1 | 72·0 | 70·0 | 71·7 |
| Fibrine, . . . . . | 2·3 | 1·2 | 2·8 | 3·9 | 2·5 | 2·1 |
| Water, . . . . . | 755·8 | 814·2 | 799·0 | 826·9 | 800·7 | 830·6 |

*Analysis of* 1000 *grammes of Serum.*

| | 1. Man. | 2. Man. | 3. Man. | 4. Man. | 5. Woman | 6. Woman. |
|---|---|---|---|---|---|---|
| Density of the serum, | 1022·1 | 1021·1 | 1017·5 | 1020·0 | 1024·1 | 1820·0 |
| Solid parts, . . . . | 91·8 | 80·8 | 69·8 | 80·0 | 82·6 | 79·2 |
| Water, . . . . . | 908·2 | 919·2 | 930·2 | 920·0 | 917·4 | 920·8 |

It should be observed that these analyses were made previous to the period when the application of the polariscope to the study of albumen would have permitted a more exact appreciation of this latter element.

The following conclusions may be drawn from these grave cases:—

The *density of the blood* is, in general, diminished in a sensible degree.

The *globules* in normal proportion in two of the men have been considerably below the average in two others; they have exhibited corresponding diminutions in one of the women.

These facts being observed, we should examine into these deficiencies in the anterior state, the nature of the food, and particularly the anemic condition which preëxisted, the above modification of the globules not being altogether due to the disease itself.

The *fibrine* was found either in normal proportions or occupying limits inferior to the physiological state or in diminished quantity; this tendency to diminution, therefore, is a fact worthy of notice.

The *density of the serum* is, in general, remarkably diminished; this diminution is, probably, the effect of the diet and the disease combined; it is, however, much more considerable in one case than in the others.—*Med. Chir. Rev.*

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*On Hydrophobia as it occurred in France in* 1852. By M. Ambroise Tardieu. In the year 1850, the minister of agriculture and commerce, on the recommendation of the committee of public health, sent a circular to every prefect in France, requesting him to give information regarding any cases of hydrophobia which might occur in his department. A number of reports were in consequence sent in, but as these were in some respects incomplete, a fresh circular was issued, detailing more particularly the manner in which the cases should be recorded. From the information so obtained, M. Tardieu drew up a report re-

garding the cases which occurred in the years 1850–51, as well as in 1852. As the report for the year 1852 is much more complete than the others, we subjoin an abstract of it.

1. The number of cases of hydrophobia which occurred in France during the year 1852 was 48. These were observed in 14 departments: the department in which the greatest number occurred was that of the Hautes Alpes (in the southeast of France, latitude between 44° and 45°); while the department of Lozère (also in the south, and having the same latitude as the other) came next.

2. With regard to the sex; 36 of the 48 cases were males, 12 females; the proportion in the two preceding years was almost the same.

3. The following table exhibits the ages of the subjects affected with hydrophobia:

| | | | | | |
|---|---|---|---|---|---|
| Below 5 years, | in 1852, | 3 | in two former years, | 4 = | 7 |
| From 5 to 15 | " | 16 | " " | 14 = | 30 |
| " 15 to 20 | " | 4 | " " | 11 = | 15 |
| " 20 to 30 | " | 3 | " " | 9 = | 12 |
| " 30 to 60 | " | 17 | " " | 37 = | 54 |
| " 60 to 70 | " | 1 | " " | 7 = | 8 |
| Above 70 | " | 0 | " " | 6 = | 6 |
| Not mentioned | " | 4 | " " | 0 = | 4 |
| | | 48 | | 88 = | 136 |

This table shows the incorrectness of the opinion which ascribes the disease to the effects of terror, for it shows that 7 children under five years of age have been attacked.

4. All the cases which occurred in 1852 originated in the bites of dogs, except one, where the bite of a cat was the cause of the disease.

5. The situation of the wounds inflicted by the rabid animals was as follows in 48 cases:—On the face, 13 times; on the upper extremities, 15; on the lower extremities, 12; not mentioned, 8. In two of the cases the disease was communicated by pet dogs which were accustomed to lick their masters' faces, and where excoriated lips were the seat of the inoculation.

6. In 40 out of the 48 cases the date of the inoculation has been observed. It occurred in March, April, and May in 10 cases; in June, July, and August, 16; in September, October, and November, 4; in December, January, and February, 10.

7. It seems a considerable number of individuals who are bitten by rabid animals escape the disease. During 1852 some observations were made on this point, and it appeared that out of 44 persons bitten about the same time 23 only were attacked.

8. The period of inoculation of the disease was exactly noted in 20 cases. It was as follows:—Less than a month in 8 cases: from 1 to 3 months 10; from 3 to 6 months 1; 11 months, 1.

9. The duration of the disease in 20 cases was 2 days in 6 cases; 3 days in 8; 4 days in 5; 6 days in 1.

10. The termination of *confirmed* cases of hydrophobia was constantly fatal. Of the 48 cases, it appears that only 27 came under this category; in the others the effect was merely local. In 12 of these

27 cases no precaution was taken, in 4 no mention is made of this circumstance. In 8 of the remaining 11 cases cauterization was resorted to immediately, in 3 at a late period. Of the 21 individuals who escaped (see ¶ 7) cauterization was energetically performed in 12 cases; the details of the other 9 have been omitted.

11. As to the mode of cauterization employed, the actual cautery was used in all cases but 5, and these were treated by protonitrate of mercury, nitric acid, ammonia or butter of antimony. In Germany it has been proposed to excise the bitten parts and then to wash the wounds with a solution of caustic potash.—*Annales d'Hygèine.*

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*On the Influence of Belladonna in Counteracting the Poisonous Effects of Opium.* By Thomas Anderson, M. D.—Dr. Graves had first suggested that, in continued fever, with protracted pupils and coma, if an agent, administered internally, would occasion dilatation of the pupils, it might also relieve the other symptoms of cerebral derangement. Dr Anderson, acting on this theory, administered large doses of belladonna in two cases of poisoning by opium, which he related as follows:—

"A patient of whom I had charge, and laboring under delirium tremens, having received an overdose of a solution of the muriate of morphia, became comatose. He had taken, in thirty-six hours, two ounces of the solution of the muriate of morphia, and it had been continued by the attendant after sleep was procured. When I saw him he was in profound coma, his breathing was stertorous, amounting to no more than four or five per minute, and his pupils were contracted to mere points. His pulse was excessively weak, and rather slow; it was quite impossible to rouse him. I ordered him, immediately, the following mixture:—Tincture of belladonna, six drachms, in five and a half ounces of water, of which an ounce was to be given every half hour. Three ounces of the mixture were administered with great caution, after which his pupils began to dilate. The six drachms of the tincture of belladonna were taken, and in four and a half hours after the first dose of it was given, the patient was in the following condition:—The coma was entirely gone, respirations were between twenty-two and twenty-five per minute, the pupils were much dilated, the pulse had risen to nearly one hundred and twenty in the minute, and was also increased in strength. His countenance, also, from being cold and pallid, had become much flushed, and the whole body was much warmer. He replied, readily and coherently, to all my questions. He continued to improve for three days after, when, rising suddenly to stool, he fainted, and before the assistance of the nurse could be procured, he was dead.

A fortnight afterwards, a woman about 50, took, at four P.M., two drachms of laudanum, and, at half past five P.M., three drachms more. She was brought to the infirmary at eight P.M. After making vain attempts to rouse her from the coma, by walking her about, &c., the stomach-pump was used at a quarter past eight P.M. By this means her stomach was thor oughly evacuated, but no trace of opium was detected by smell or sight. It had, probably, been all

absorbed. A current of electricity was then applied to her hands for nearly ten minutes, but without rousing her. I saw her at a quarter to nine P.M., for the first time, and on being told that she had been poisoned by laudanum, I determined to try the effects of belladonna.

At that time her pupils were contracted to mere points, her respiration was stertorous, ten per minute, the pulse was feeble, and the extremities rather cold. Between nine and half-past nine, I gave her one ounce of tincture of belladonna in three ounces of water, which was all swallowed, but with difficulty. In the course of the next half hour, two drachms more were administered. At eleven P.M., the first alteration on the size of the pupil was observed; the respirations had also then increased to twelve or thirteen in the minute, and the pulse was much stronger. The symptoms continued to improve till two A.M., when all indications of opium poisoning had disappeared. The woman was then sitting up in bed talking to the nurses, with pupils dilated to a little more than their natural size, and still slightly sensible to light. The extremities were quite warm, the pulse about 100, and of good strength.

She gave me a coherent account of her motives for taking the poison, of the amount of money she had spent in purchasing the laudanum, and the names of the druggists where it had been procured. She also replied sensibly to questions about her family, and the ages and occupations of her children. She continued awake till nearly four A.M., after which she slept till nine A.M. In the morning I found her pretty well, her pupils being no more dilated than they were four hours after the first administration of the belladonna. She complained, however, of nausea, but unaccompanied with vomiting. This symptom, along with the dilated pupils, had entirely disappeared in the course of two days. She was kept in the hospital, under observation, for ten days after the accident, at the end of which time she was dismissed, perfectly well. The tincture of belladonna, used in both these cases, was of the strength of four ounces of the leaves to two pints of rectified spirit, and prepared by percolation. Half a drachm is considered a full dose. I have seen dilatation of the pupil produced by a drachm given at once.

The committee on Dr. Anderson's communication reported that they had designed to test Dr. Anderson's views by experiments on animals, but had found, on inquiry, that the animals commonly used for experiments were almost entirely insusceptible of the poisonous action of opium or belladonna. Where the effects were so different from those observed in man, it is obviously impossible to pursue the investigation which they had intended; the committee, therefore, while recognizing that Dr. Anderson's views require more extended observations in order to confirm them, deemed them worthy of the attentive consideration of the Society.—*Edin. Monthly Journal.*

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*On the Employment of Chloroform in restlessness, following Hemorrhage.* By T. E. Beatty, M.D.—I am not aware that the powerful agent, for which we are indebted to Dr. Simpson, has been used by any one in cases of *uterine hemorrhage;* and from the imper-

fect knowledge hitherto attained of the truly wonderful properties of this medicine, it is not surprising that its application to such cases should have been looked upon as inadmissible by even its most warm supporters. In the case I am about to relate, I was, I may say, compelled to resort to chloroform for assistance, and I am happy to say I did not call in vain. The success was so striking, the result so gratifying, that I did not hesitate to employ it in another and similar case, which occurred since I commenced to put these observations together for publication.

February 14, 1853. I was brought five miles from Dublin to attend a lady who had been under my care in three former confinements while she resided in the city. On my arrival I found the head just passing through the vulva, the labor having been short and easy. The child was soon expelled, and before the placenta came away a very profuse hemorrhage took place. A drachm of ergot of rye was now administered, pressure, &c., of course, was attended to, and the placenta, being found in the vagina, was removed. The hemorrhage continued with great rapidity, notwithstanding very good contraction of the uterus. Vinegar and water, freely applied, seemed unavailing. The ground was covered with snow at the time. I ordered a bucketful to be brought up to the room, and making up balls I passed them into the vagina, and heaped the hips and abdomen with the snow. By these means the hemorrhage was at last arrested, but the patient, a very small, slender woman, was reduced to a very low ebb indeed. The pulse was nearly imperceptible, the breathing distressed and gasping, and the formidable complaint of noises in the ears was urgently made. Fifty drops of laudanum in brandy were given, and in a quarter of an hour, the symptoms growing worse, seventy drops more and large quantities of the brandy were taken. Great exhaustion, great nervous excitement, great desire for sleep, harassed the patient. Repose was indispensable to her safety; opium did not procure it; time was of consequence. It occured to me that if I could tranquillize the nervous system for even a short time, the opium she had taken would come into play and continue the narcotic influence so essential to her life. I fortunately had my chloroform with me, and as she lay tossing from side to side, and calling for air, I applied the chloroform to her nose. She soon became more calm, by degrees the jactitation ceased; she assumed a more composed attitude; and, to my great delight, sleep, quiet and natural, soon came over her. Hot jars were placed to her legs and feet, and finding the sleep so natural, I held the instrument with the chloroform at a distance from her mouth, so as to keep up the action in a faint degree. It was most interesting, and, as may be well imagined, very exciting, to watch the state of the pulse during this time. I was too far off to get any assistance. I had tried an experiment with a powerful agent, but my firm belief was that the new medicine would save her life. With the finger on the pulse while she slept, I waited for the returning wave, sometimes imagining the impulse was greater, again finding it feeble as before. But it did increase in strength, and before she had slept half an hour there was a manifest improvement in the beat. The feet were kept warm, and the

sleep was kept up for two hours, at the end of which time she awoke most miraculously refreshed. In fact, I never saw any patient so thoroughly recovered at the end of twenty-four hours as this lady was at the end of two. She rapidly returned to perfect health.

Encouraged by the marked benefit derived from the administration of chloroform in this hitherto forbidden kind of case, I was led to employ it under similar circumstances on the 8th of the present month, (March). A lady was delivered of her third child after a natural, easy labor, and as soon as the placenta came away, a great rush of hemorrhage followed, which continued with great violence for an hour. Ergot and the usual means succeeded in arresting the flow of blood, but she was left in a very exhausted condition. Absence of pulse, prostration, sighing, jactitation, &c., were prominent. Laudanum in doses of fifty drops, repeated in ten minutes, and brandy freely given, failed to procure rest. Indeed, the opium seemed rather to prevent sleep. I now placed a piece of sponge in the bottom of a conical shaped wine-glass, and having moistened it with chloroform, I held the glass over the mouth and nose of the patient. The medicine did not fail to produce its usual soothing effect. Soon the nervous excitement passed away, by degrees the eyelids closed, and healthy natural sleep was induced. This was maintained for two hours, during which the warmth of the body returned, the pulse returned at wrist, and slowly regained strength, and at the end of the time, when she awoke, she said she felt perfectly well and happy. She described the first effects of the chloroform as being most delightful. The peace of mind and soothing of the whole nervous system produced by it, she declared resembled a foretaste of heaven.

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*Conclusions respecting Injections of Iodine in Ovarian Dropsy.* By Professor Simpson.—Within the last year, Dr. Simpson has, subsequently to tapping, injected into dropsical ovarian cysts the tincture of iodine in seven or eight cases. For this purpose he has employed the common tincture of iodine of the Edinburgh Pharmacopeia, undiluted. He has usually thrown into the cysts two or three ounces of the tincture. In some cases he has allowed a portion of the injected fluid to reëscape; in others, has retained the whole of it in the sac of the cyst that was tapped. From these cases he drew the following conclusions:—

1. In none of the cases of ovarian dropsy, treated with iodine injections after tapping, has he yet seen any considerable amount of local pain follow the injection, with one exception; in most instances no pain at all is felt; and in none has constitutional irritation or fever ensued. In the one exceptional case considerable local irritation followed; and the pulse rose to 110; but the same phenomena occurred in the same patient after previous tappings without iodine being used.

2. While the practice seems thus so far perfectly safe in itself, it has by no means proved always as successful, as in hydrocele, in preventing a reaccumulation of the dropsical fluid; for in several instances the effusion into the sac seems to have gone on as rapidly as after a simple tapping without iodine injection.

3. But, in two or three of the cases, the iodine injection appears to have quite arrested, for the time being, the progress of the disease, and to have produced obliteration of the tapped cyst, as there is no sign whatever of any reaccumulation, though several months have now elapsed since the date of the operation.

Lastly. Accumulated experience will be required to point out more precisely the special varieties of ovarian dropsy most likely to benefit from iodine injections, the proper times of operating, the quantities of the tincture to be injected, and other correlative points. Perhaps the want of success in some cases has arisen from an insufficient quantity of iodine being used, and from the whole interior of the cyst not being touched by it. The greatest advantage would of course be expected from it in the rare form of unilocular ovarian cysts. In the common compound cyst, the largest or most preponderating cyst is usually alone opened in paracentesis; and though it were obliterated, it would not necessarily prevent some of the other smaller cysts from afterwards enlarging and developing into the usual aggravated form of the disease.—*Month. Jour. Med.*

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*Puerperal Convulsions and Albuminuria. By* M.M. Depaul and Mascaret. ('L'Union Méd.')—M. Depaul has read an able report upon a vary instructive memoir by M. Mascaret, to the Academie de Medecine, upon this important subject. The author divides the cases of eclampsia into predisposing and occasional. He regards as special predisposing causes, first, labors, the sanguineous and lymphatico-sanguineous temperaments, infiltration of the legs; but he does not consider albuminuria, and in this M. Depaul confirms the views of the author, as an essential cause of the disease. M. Depaul cited three cases of puerperal convulsion, in which no trace of albumen could be discovered in the urine; one which had occurred in his own practice, one recorded by Dr. Leuer, and a third by Professor Dubois. Two additional cases are recorded in M. Mascaret's memoir. M. Depaul again refers to the frequency of albumen in the urine of pregnant women, and the comparative and absolute rarity of convulsions. Out of 41 women in whom the urine was found albuminous, observed by Dr. Blot at the Maternity, only 7 were seized with eclampsia. In order to collect these 41 cases, he examined the urine of 205 women, taken indiscriminately from the wards of the hospital. Further, M. Depaul cites two cases, in which, having examined the urine before labor without finding any albumen present, convulsions broke out, and the urine was found to contain albumen after the second fit in the first case, and after the fourth fit in the other case. M. Depaul also observed that the albumen disappears with remarkable rapidity after delivery, whilst not seldom convulsions only appear some hours or even some days after parturition. The reporters, however, admitted that albuminuria was too frequently observed in the course of gestation, and coincided too frequently with puerperal convulsions, not to render the investigation of the relation of these conditions necessary. M. Depaul observed that the common explanation of albuminuria in pregnant women was not to be found in inflammation of the kidney. In the autopsies he had

made, the kidneys were found either perfectly healthy, or simply congested. The true point of departure he believed to be, the modifications that gestation caused in the blood.

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*On the differential Diagnosis of Hydrocele, and the diseases with which it may be confounded.* By R. G. H. Butcher, Esq. (*Dublin Jour. Med. Sci.*)

| HERNIA. | HYDROCELE. |
|---|---|
| Begins above. | Begins below. |
| Changeable in bulk. | Unchangeable. |
| Engages ring. | Ring free. |
| Feeling of weakness. | Feeling of weight. |
| Can often feel intestines, or omentum. | Can feel nothing. |
| Testicle at the bottom. | Testicle at back part. |
| Opaque: in child sometimes transparent. | Often transparent. |
| Base of tumor above. | Base of tumor below. |
| Flatulence, dyspepsia. | Bowels not deranged. |

| VARICOCELE. | HYDROCELE. |
|---|---|
| Soft, like earth-worms. | Tense, elastic. |
| Changeable, like hernia. | Unchangeable. |
| Ring dilated often. | Ring closed. |
| Testicle distinct. | Testicle indistinct. |
| Testicle wasted. | Enlarged, if distinguishable. |
| Tumor whole length of chord. | Tumor at bottom. |
| Tumor light. | Tumor heavy. |

| VENEREAL TESTICLE. | HYDROCELE. |
|---|---|
| Both engaged generally. | One tunica vaginalis generally. |
| Tumor very heavy. | Tumor not so heavy. |
| Hard all over. | Hard only at back part. |
| Size moderate. | Often very large. |
| No fluctuation; sometimes small quantity of fluid. | Fluctuation. |
| Tumor slanting. | Tumor perpendicular. |
| Painful to handling. | Not painful. |
| Solid contents. | Fluid contents. |
| Eruption, or sore throat. | None such necessarily. |

| SCROFULOUS TESTICLE. | HYDROCELE. |
|---|---|
| Round in form. | Oval in form. |
| Never very large. | Often very large. |
| Solid. | Fluctuating. |
| Heavy. | Light. |
| Lies at the bottom of the scrotum. | Grows upwards. |
| Inflames in spots. | Never so. |
| Suppurates, fungates. | Never suppurates. |
| Scrofula in other glands. | Not so. |

| FUNGUS HÆMATODES. | HYDROCELE. |
|---|---|
| Tumor irregularly hard and soft, hardness predominating in early stages. | Uniformly smooth. |
| Shape, globular generally. | Oval generally. |
| Rapid in growth. | Slow in formation. |
| Painful. | Free from pain. |
| Opaque. | Transparent. |
| Elastic. | Fluctuating. |
| Chord becomes hard and knobby. | Chord sound. |
| Pains up loins. | No such pains. |
| Health impaired. | Not so. |
| Fungates. | Never. |

| CANCER OF THE TESTICLE. | HYDROCELE. |
|---|---|
| Hard, knobbed. | Soft, smooth. |
| Small. | Large. |
| Round. | Oval. |
| Painful on handling. | Not so. |
| No fluctuation. | Fluctuation. |
| Chord knobby. | Chord soft. |
| Adheres to scrotum. | Never. |
| Glands in groin enlarged. | Never engaged. |
| Shooting pains. | Never (in loins). |
| Fever peculiar. | No fever. |
| Fungates. | Never. |
| Death. | Never. |

In hydro-sarcocele the testicle will be found hard, painful, irregular, large at the back part, with some fluctuation in front. Testicle distinguished in hydro-sarcocele, not so in hydrocele generally. Shooting pains on handling the former, not so in the latter. If obscure, the tumor may be tapped, and then the enlargement of the testis will be discovered, and the water small in proportion to the size of the tumor.

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*On the treatment of Hemorrhoids by the Galvanic Cautery.* By Richard Steel, Esq. Having observed that in the recent discussion, at the Medical Society, on the subject of hemorrhoids and the several modes of treatment thereof by excision, ligature, nitric acid, etc., no mention was made of the galvanic cautery, I am induced to communicate the fact that the latter method has been most successfully applied by myself and also by a friend at my suggestion. His case is a peculiarly interesting one, having been previously treated by concentrated nitric acid, and subsequently by the galvanic cautery. It exhibits the great superiority of the latter in several important particulars, and in a more striking manner than any number of cases in which one method only has been employed.

The apparatus which we have used for igniting the coil of platinum wire has been made by myself, and consists of a modification of Wollaston's battery of a dozen pairs, so contrived as to admit of being con-

veyed from place to place with the certainty of not deranging it; and it is set in action with ease and readiness when required. I had previously used a Grove's battery, which I had by me, but felt it desirable to arrange a battery better suited to be sent to a distance from home, and then found immediately ready for use.

The idea of using this plan of treatment for hemorrhoids was suggested to my mind on learning the satisfactory results of the galvanic cautery, as used by Mr. Marshall, of University College Hospital, for the destruction of morbid growths, also for producing artificial contraction of mucous membrane, especially of that lining the vagina, for the cure of prolapsus uteri. Having repeatedly employed the method so suggested for removing erectile tumors and semimalignant growths, I was struck with the comparative painlessness of the application, and at once conceived the idea of applying it to the treatment of hemorrhoids. I was confirmed in the idea on examining a case requiring an operation, and which presented so large a mass of redundant matter, that I was anxious to avoid, if possible, inflicting the severe pain involved in the repeated use of the acid on the one hand, and the danger of hemorrhage following excision on the other. Here was a diseased mass to be destroyed, and relaxed mucous membrane, producing prolapsus, to be contracted; the loss of substance caused by the actual destruction of diseased tissue primarily, and subsequently by the separation of sloughs, secured the first indication; the contraction of the cicatrices secured the second. The ignited platinum coil being applied more or less deeply, or over a greater or less surface, will produce any amount of destruction of parts or of contraction that may be necessary. The smaller amount of pain and of danger to the patient is such, that I shall in future use it in the treatment of this disease, in preference to any other method with which I am at present acquainted.

*Case by* Elmes Y. Steel, Esq.

I was consulted about three months ago, by a gentleman, under the following circumstances. For thirteen years he had been suffering from hemorrhoids with prolapsus, in so severe a degree as to be compelled to leave the army, which he did about seven years ago, when he placed himself under treatment in London, without obtaining relief. The malady subsequently became aggravated to the extent of incapacitating him for physical exertion of any kind, such being invariably followed by protrusion attended by extreme suffering and profuse hemorrhage. Deeming his case to be incurable, he had of late taken no other precautionary measures than those dictated by his own experience, for the purpose of alleviating in some degree the extreme suffering whereby too often his life was made a burden to him.

On examination, I found a mass, fully of the size of a cricket ball, consisting of hemorrhoidal tumors, varying in intensity of color and in degree of hardness, but all exquisitely tender to the touch. Having found by experience that the operation by ligature, however modified, was often followed by intense suffering, inducing irritative fever, whereas the application of concentrated nitric acid was always safe, certainly less painful, and frequently quite as successful, I determined upon using the latter method in the first instance.

Accordingly, on the 29th of last November, I applied the acid freely to the more prominent parts of the internal mass, avoiding the outer ring, which I had smeared with oil in the usual way. The pain thus occasioned was severe at the time, and continued for some hours, not altogether subsiding for several days, although not such as to require confinement to bed.

On December 4th, the hemorrhoidal mass somewhat lessened. A second and third application, at intervals of ten days, were followed by similar results; the hemorrhoidal tumors having sensibly yielded to the treatment, but still presenting a formidable appearance.

At this time, the suggestion of the galvanic cautery having been made to me by my cousin, Mr. Richard Steel, and he having supplied me with a battery of his own contrivance for the purpose, I determined upon resorting to it for the further treatment of the case.

On Jan. 18th, I proceeded to touch the more prominent of the remaining tumors with the ignited coil. The pain was comparatively so trifling as to be thought insignificant; and immediately after the return of the gut, my patient walked about the house as if nothing had been done.

On February 8th, the parts which had been touched by the cautery were found to have sloughed away, leaving sulci, which will, I doubt not, on cicatrization becoming complete, have effectually promoted the contraction of all redundant mucous membrane. The cautery was a second time applied with similar results, and so effectually, that the patient can no longer protrude the hemorrhoids sufficiently to admit of external examination. He can now use any exertion, such as lifting heavy weights, without inconvenience; and, for the first time during many years, he has relief from his bowels without pain or hemorrhage. He says that the galvanic cautery is painless in comparison with the nitric acid application; and I can vouch for the fact of its efficacy, as well as for the ease with which it can be applied to any extent that may be required. In a word, I feel assured that it is on every account a most valuable, safe, and convenient application for the removal of hemorrhoidal tumors.—*Assoc. Med. Jour.*

## OBITUARY.

Obituary Notice of M. Roux.—This illustrious surgeon is no more. He died of apoplexy, on the 23d of March. M. Roux was professor in the Faculty of Paris, surgeon to the Hotel-Dieu, vice president of the Academy of Sciences (Institut), member of the Imperial Academy of Medicine (of which he was formerly president), member of the Society of Surgery and a great many other learned societies, french and foreign, officer of the Legion of Honor, &c., &c. He was born at Auxerre in 1780, and consequently was 74 years of age at the period of his death. M. Roux went to Paris 1797, where he soon became acquainted with Bichat. From an acquaintance he became Bichat's friend and associate in his labors. During the *concours* of 1802, he contested a hospital place with Dupuytren, who he was destined to meet ever after in his path as an opponent. He was surgeon to

Beaujon Hospital in 1806, and was transferred to *la Charitè* in 1810, where the great Boyer was also surgeon, and whose daughter he afterwards married. Boyer spoke of him as the most dexterous operator of the day. His most brilliant *concours* was in 1812, with Dupuytren again for an adversary; although unsuccessful, he made such an impression on the Faculty, that another chair becoming vacant some years after, it was awarded to him by an unanimous vote. "The ardor and learning" says M. Velpeau, "shown by M. Roux in these public struggles, have never been equalled by anybody." Although M. Roux's writings have not been voluminous, yet he has enriched the literature of his country by some admirable works. It is melancholy to think that he should have been snatched away at a moment when he only required a few months to complete the publication of a work, which is to give to the world, the treasures of an unparalleled surgical practice. But for his twenty-five years war with Dupuytren, how much more would we not have had from his pen? However, a constant struggle for supremacy with so formidable a rival, almost precluded the possibility of his continuing the work of composition.

The funeral of M. Roux took place on the 27th of March. The religious service over his remains was performed in the church of *St. Germain-des-Prés.* M. de Castelnau in his own terse style, says, "The funeral of M. Roux was worthy of his memory." His remains were deposited in the cemetery of *Mont-Parnasse*, where rests the illustrious Lisfranc. Six discourses were pronounced: by Messrs. Velpeau, in the name of the Institut; Malgaigne, in the name of the Faculty of Medicine; F. Dubois, in the name of the Academy of Medicine; Marjolin, in the name of the Society of Surgery; Larrey, in the name of the Military Surgeons, and Duchaussoy, in the name of the Hospital Internes. M. Malgaigne's discourse is an evidence of that wondrous power of intellect which characterizes the great orator. M. Velpeau's discourse was admirable as a true appreciation of his dead colleague's career. I cannot refrain from giving the apostrophe with which he concludes, it is exceedingly touching: "Venerated master, faithful friend, thou hast nothing to fear from the celestial life; thou hast done thy duty toward thy fellow-creatures, thy career has been fully, nobly performed! Thy memory will never perish; thy name, forever honored, will occupy a great and illustrious page in the history of useful, of learned men. From the abode of the elect, God will permit thy great shade occasionally to cast an indulgent look on us; then thou wilt know that among thy former students, there is one who will cherish thy remembrance, and be grateful to thee to his last hour; who, in bidding thee an eternal adieu, leaves thy grave, his heart bursting with tears and sorrow."

## PART FOURTH.

# AMERICAN MEDICAL RETROSPECT.

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*Proceedings of the American Medical Association, at its Seventh Annual Meeting, held in St. Louis, Mo., May 2d, 3d, 4th and 5th.* The seventh annual meeting of the American Medical Association was held in Veranda Hall, in this city, on Tuesday, May 2d, 1854. In the absence of the President, Dr. KNIGHT, of New Haven, at 11 o'clock, A.M., the Association was called to order by Dr. USHER PARSONS, of Rhode Island, the first Vice-President.

Dr. JAS. R. WASHINGTON, on behalf of the Committee of Arrangements, welcomed the delegates, and tendered to them the hospitalities of our citizens, in a neat and appropriate address, which was responded to on the part of the Association by Dr. PARSONS.

On the calling of the roll, according to States, about two hundred delegates answered to their names.

The roll being called, the President announced that the Association was organized. He congratulated the Association on the return of their anniversary; and expressed himself much pleased to see so many new delegates.

The report of the Committee on Publications was now read, and laid on the table. The Treasurer's report was also read and referred.

On motion of Dr. WHITE, of New York, a recess of fifteen minutes was now had, to allow the delegates of each State to meet and nominate one of their number to form a Nominating Committee to report permanent officers for the Society.

On reassembling, the following gentlemen were reported as composing the Nominating Committee:

Maine, Dr. Charles Mitlett. Massachusetts, Dr. D. H. Storer. Connecticut, Dr. P. G. Rockwell. New York, Dr. L P. White. New Jersey, Dr. George R. Chitwood. Pennsylvania, Dr. Rene La Roche. Virginia, Dr. Adam Spitler. Minnesota, Dr. J. H. Murphy. South Carolina, Dr. Thomas G. Prioleau. Illinois. Dr. W. B. Herrick. Alabama, Dr. S. W. Clanton. Louisiana, Dr. E. D. Fenner, Missouri, Dr. Thomas Reyburn. Michigan, Dr. William Brodie. Mississippi, Dr. T. J. Grafton. Iowa, Dr. D. Seviter. Tennessee, Dr. J. B. Lindsley. Wisconsin, Dr. J. B. Dousman. Kentucky, Dr. Robert J. Breckenridge. Ohio, Dr. O. M. Langdon. Indiana, Dr. W. W. Hitt. United States Navy, Dr. Pinckney.

Leave of absence was granted to the Committee. During their retirement communications were read by the Secretary, Dr. E. S. LEMOINE, from Dr. Knight, explaining his absence; from E. L. BEA-

DLE, of New York, tendering his resignation as one of the Secretaries, and others.

Dr. BRAINARD, of Chicago, presented a resolution which provided, that hereafter the meetings of the Association be held alternately in the Northern, Southern, and Western portions of the Union. The resolution gave rise to considerable discussion, and was finally laid on the table.

On motion, adjourned to 3 o'clock, P.M.

*Afternoon Session.*—On taking the chair, Dr. PARSONS, the senior Vice-President, in the absence of the President, delivered an able and interesting address, which was listened to with interest, and which, no motion, was referred to the Committee on Publication, to form a part of the transactions.

The following letter from a permanent member at Marseilles was read:

MARSEILLES, March 10, 1854.

DR. EDWARD L. BEADLE, Secretary American Med. Association:

Please to state to the American Medical Association, at their meeting in St. Louis, that I have presented to the Imperial Academy of Medicine, at Paris, the sixth volume of their transactions, that it has been received by that distinguished body with much favor, and that it has been referred to a committee for examination and report (M. Velpeau, Chairman).

I have also promised M. De Bois. perpetual Secretary of the Academy, to endeavor to procure for the Academy the five previous volumes, and I feel assured that the Academy would take much pleasure in establishing a correspondence with our American Medical Association.

With great respect, yours truly, JOHN G. ADAMS.

A communication was read from the Medical Association of the city of New York, in reference to the melancholy accident at Norwalk, Conn., which took place immediately after the adjournment of the Association last year, and by which so many of its members came to an untimely end. It was recommended that brief biographical sketches be prepared and published with the Transactions.

The following communication from the New Hampshire Medical Society was read:

At the annual meeting of the New Hampshire Medical Society, holden at Concord, June 1, 1853, the following resolutions were unanimously adopted:

*Resolved*, That it is the decided opinion of the New Hampshire State Medical Society, that no delegate should be admitted to membership in the American Medical Association, who represents a Medical society which numbers among its members any person or persons who adopt as their system of practice any of the forms of empiricism.

*Resolved*, That the Secretary of the Society be instructed to transmit a copy of this resolution to the Secretaries of each of the State Medical Societies, and to the Secretaries of the American Medical Association, previous to their next annual meeting.

E. K. WEBSTER,
*Secretary N. H. Med. Society.*

BOSCAWEN, June, 1853.

DR. GROSS, of Louisville, Kentucky, offered the following resolution:

*Resolved*, That hereafter it shall be considered disorderly for committees of arrangements of this Association to give costly entertainments.

This resolution gave rise to some discussion. Dr. McPheeters, of St. Louis, moved the following as an amendment:

*Resolved*, That in future, committees of arrangements be requested to dispense with all costly and extravagant entertainments. This amendment was accepted by the mover, and carried by a large majority.

The Committee on Nominations now made their appearance, and, through their Chairman, Dr. White, of Buffalo, N. Y., recommended the following for permanent officers:

*For President*—CHARLES A. POPE, M.D., of Missouri.

*Vice-Presidents*—E. D. FENNER, M.D., of Louisiana; N. S. DAVIS, M.D., of Illinois; WILLIAM T. WRAGG, M.D., of South Carolina; JOHN GREEN, M.D., of Massachusetts.

*Secretaries*—E. S. LEMOINE, M.D., of Missouri; FRANK WEST, M.D., of Pennsylvania.

*Treasurer*.—D. F. CONDIE, M.D., of Pennsylvania.

The report was accepted, and the officers elected to fill their several stations. Dr. Storer, of Boston. Dr. White, of Buffalo, Dr. Brainard, of Chicago, and Dr. Reed, of Tennessee, were appointed a committee to conduct the newly-appointed officers to their seats on the platform.

Dr. POPE not being present, owing to sickness in his family, Dr. Fenner, the first Vice-President, took the chair, and returned thanks for the honor conferred on him by selecting him as one of the Vice-Presidents, in a few appropriate remarks.

Dr. BIDDLE, of Philadelphia, extended an invitation from the profession of that city to the Association to hold the next annual meeting in Philadelphia.

A resolution of the Detroit Medical Society was also presented by one of the delegates from Michigan, inviting the Association to hold its next meeting in Detroit.

The report of Dr. CONDIE, Chairman of the Committee of Publication, was read; the report closed with a series of resolutions, for the consideration of the Association, which provides that a fee of three dollars should be required of each member annually, to defray the expense of publishing the Transactions of the Association, and that the name of any member refusing or neglecting to pay the same should be erased from the list of permanent members. A spirited debate sprung up on these resolutions, and after being amended, so as to require that permanent members should be notified by the Secretary of their indebtedness before their names were stricken from the list, they were adopted without opposition.

Dr. ATLEE, on behalf of the committee to procure a stone with a suitable inscription for the monument of Washington, reported that he had adopted, at the suggestion of the lamented Dr. Pierson, of Salem, the design for the stone, representing HIPPOCRATES refusing the presents of King Artaxerxes, who invited him to go to Persia and succor the enemies of Greece. The sculpture was on beautiful marble,

by *Samuel Beck*, a young artist of Lancaster county, Pennsylvania, from a daguerreotype copy of *Viardot's* celebrated picture, presented to him by Miss ABBY L. PIERSON. The execution of the work is in the highest style of art, and evinces extraordinary talents in the artist. He also stated, that in order to complete the work, $400 in addition to what had already been received would be required, and those favorable to the undertaking were invited to come forward and contribute.

Dr. CHARLES HOOKER, of Conn., was appointed Treasurer *pro tem.*, Dr. CONDIE, the Treasurer, being absent.

Dr. POPE, the President elect, appearing in the Association, was conducted to the Chair, and on taking his seat returned thanks for the honor conferred on him in the following address:

*Gentlemen:*—There are occasions when the mouth is dumb, because the heart is full. I am unequal to the task of thanks. Honor, which is valuable according to its source, is in the present case great indeed; for I behold around me the members of a noble profession, the cultivators of a yet nobler science, gathered from the wide extent of our beloved country.

I would that this undeserved and unexpected honor had fallen on an older and worthier than I, for many such I see before me. In one thing only will I claim equality: for, however unworthy in other respects, I yield to none in ardent devotion and ceaseless love to our time-honored art. But I would not claim more than I ought. Nor do I misconstrue the honor, which your partiality has conferred upon me; for well I feel that it was intended less as an individual compliment, than one to the West in general, and to Missouri especially. In this view, gentlemen, for them and for myself, I return you the warm unfeigned thanks of a grateful heart.

Relying on the partiality which has thus elevated me to my present position, and claiming indulgence for any short-comings in presiding over your deliberations, I shall endeavor to acquit myself to the best of my poor ability.

Again, gentlemen, I thank you.

Dr. N. PINCKNEY, of the U. S. Navy, was introduced to the meeting, and in behalf of the Medical Staff of the Navy, delivered an eloquent address, expressing in glowing terms the thanks of the medical officers of the navy to the Association for the aid they had rendered them in obtaining from Congress the assimilated rank they desired.

A communication was received from the Hon. L. M. KENNETT, inviting all the members of the Association and the Faculty of the city in general, to partake of the hospitalities of his house, in an entertainment to be given in the evening. A similar invitation was also extended by Drs. Moore, McPheeters, and Reyburn.

A communication was also read from the President of the Board having charge of the Institution of the Blind, of St. Louis, inviting the members of the Delegation to visit that Institution during their stay in the city.

After which the Association adjourned until 9 o'clock, Wednesday morning.

*Second Day—Wednesday.*—The meeting convened as per adjournment at nine o'clock, A.M., Dr. POPE, President, in the Chair.

The minutes of the preceding day were read, and after one or two slight amendments, were adopted.

The Chairman of the Committee of Arrangements reported fifteen additional Delegates as having registered their names since yesterday.

The names of several gentlemen of the profession were offered as members by invitation, and were accepted.

A communication from the American Medical Society of Paris, signed by Dr. A. HAMMER, of St. Louis, and Dr. MURPHY, of Cincinnati, on the subject of Medical Education, was presented, which communication, after some discussion, was ordered to be laid on the table.

The President anncunced that the reading and consideration of the annual report of committees would now be in order. The following chairmen of committees submitted abstracts of their reports of the diseases and epidemics committed to their investigation, as appearing in their several sections and districts.

Dr. D. F. CONDIE, of Philadelphia, on the Causes of Tubercular Disease, was not prepared to report, and requested further time.

Dr. GEO B WOOD, of Philadelphia, on Diseases of Parasitic Origin, not being present, had sent a verbal request to be discontinued. His request was accordingly granted.

Dr. JOHN A. ATLEE, of Lancaster, Pa., on Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland, not being prepared to make a full report, requested to be continued on the same committee.

Dr. D. J. CAIN, of Charleston, S. C., on Epidemics of South Carolina, Florida, Georgia, and Alabama, read an abstract of his report, which was referred to the Committee on Publication.

Dr. W. L. SUTTON, of Georgetown, Ky., on Epidemics of Tennessee and Kentucky, made a partial report, and asked to be continued, which request was granted.

Dr. GEORGE MENDENHALL, of Cincinnati, Ohio, on the Epidemics of Ohio, Indiana, and Michigan, presented a report for the years 1852 and 1853, of which he read abstracts. The report was referred to the Committee on Publication, with the request to have it published in the proceedings of the present year.

Drs. PALMER and ATLEE each spoke at some length of the great and lasting good that might be accomplished, if all the members of the Association would duly record their individual experience of epidemics, and report all such cases to the Chairman of the Committee.

Dr. R. S Holmes, of St. Louis, Mo., on Epidemic Erysipelas, read an abstract of his report. It was referred to the Committee on Publication.

Dr. E. D. FENNER, of New Orleans, on Epidemics of Louisiana, Mississippi, Texas, and Arkansas. He read a comprehensive abstract of his report—dwelling principally on the ravages of the cholera and yellow fever, their causes and means of treatment.

Dr. FENNER had not completed his report, and Dr. MCPHEETERS offered a resolution, that he be requested to complete his report, and submit it to the Committee on Publication to be published. The resolution was adopted.

Dr. MUSSEY, of Cincinnati, moved a suspension of the regular order of business and that Dr. LINTON, of St. Louis, be requested to express his views on the pathology of yellow fever, as he understood that he entertained some peculiar views on the subject. This motion was adopted, and Dr. LINTON, being called for, took the stand, and addressed the Association at some length on the subject referred to.

In the course of his remarks, he advocated the idea that vegetable decomposition was not necessary to the production of the autumnal diseases of this country. He considered yellow fever nothing more than an aggravated type of bilious fever, caused by the retention of hydrocarbonaceous substances in the blood. In other words, the agencies producing yellow fever were *Northern blood* subject to the heat of Southern latitudes.

A motion was made and carried, that Dr. LINTON be requested to draw up the substance of his remarks, to be presented to the Committee on Publication.

Dr. DANIEL BRAINARD, of Chicago, Illinois, on the Constitution and Local Treatment of Carcinoma—requested further time to make a full report.

Dr. N. S. DAVIS, of Chicago, Illinois, on the Influence of Local Circumstances on the Origin and Prevalence of Typhoid Fever, read a brief abstract of his report, which was referred to the Committee on Publication.

Dr. DONALDSON, of Baltimore, on the Present and Prospective value of the Microscope in Disease, in a communication, stated that his report was complete, but he not being present, it was, without reading, referred to the Committee on Publication.

The report of the Committee on Medical Education was received, but owing to its length, its reading was passed over. It was referred to the Committee of Publication.

Dr. POPE, Chairman of the Committee on Prize Essays, reported that nine essays had been submitted to their consideration, of which, one was presented as a voluntary contribution. Many of these essays possessed undoubted merit both in matter and style; but the committee preferred to be governed in their choice by considerations of originality and practical import, and had therefore concluded to award but one prize. The essay selected is entitled, "An Essay on a New Method of Treating ununited Fractures and certain Deformities of the Osseous System."

On breaking the seal of the packet, DANIEL BRAINARD, of Chicago, was announced as the successful competitor.

Dr. MCPHEETERS moved that Professor BRAINARD take the stand and give the Association an abstract of his new mode of treating fractures, &c., which motion was carried, and Professor BRAINARD accordingly came forward, and in an able manner gave the requisite information.

Dr. GUTHRIE, of Tennessee, offered the following resolutions, which were unanimously carried:

*Resolved*, That in the Secretary of the Treasury's recommendation to Congress to abolish or materially modify the duty on such crude drugs, not produceable in this country, as are used in the laboratories of the country in the manufacture of chemicals, we recognize a wise provision for the further protection of the profession, and the community at large, from impure and sophisticated medicines.

*Resolved*, That a copy of this resolution be signed by the proper officers of this Association, and transmit the same to the Secretary of the Treasury, and to the Committee on Ways and Means.

Dr. J. B. JOHNSON read a letter from Dr. STEPHEN W. WILLIAMS, asking that certain resolutions which he had offered at the last meeting in New York, in reference to the preparation and publication of memorials of the distinguished dead of the profession in this country, be taken up and acted on. On motion, the resolutions were called up and adopted, and the President authorised to appoint a committee to carry them out.

In conformity with the recommendation of the Committee on Nominations, Philadelphia was fixed on as the place for holding the next meeting of the Association.

Dr. MCILVAINE offered the following resolution:

*Resolved*, That in the opinion of this Association, the practice of Professors reading lectures to their classes, no matter with how much care selected from the musty records of antiquity, is a miserable apology for teaching, is *prima facie* evidence of their inaptness to instruct, and is inimical to medical progress.

It was, on motion, laid on the table.

Dr. FRENCH submitted the following resolution, which was carried:

*Resolved*, That a committee be appointed to inquire what State or other Society, represented in this Association. are in fellowship with irregular practitioners.

Dr. BLACHFORD, of Troy, read a letter from Dr. A. D. SPORE, stating that he (Dr Spore) had been for some time investigating the subject of Hydrophobia, to ascertain what influence the weather had upon the disease, and in the letter he requested that communications on the subject might be sent to him by members of the Faculty who had opportunities of making observations. Dr. SPORE not being a Delegate, it was moved Dr. BLACHFORD be appointed Chairman of a Committee for the investigation of this subject.

The following resolution wes offered by Dr. MCDOWELL:

*Resolved*, That a committee be appointed to investigate the improvements of the instruments for Lithotomy, by NATHAN R. SMITH, PAUL F. EVE and Dr. MCDOWELL.

The resolution was laid on the table.

The following was offered by Dr. S. M. SMITH, of Columbus, Ohio, which was carried:

*Resolved*, That a Standing Committee of ——— be appointed by the Association on the subject of Insanity as it prevails in this country, including its *causation*, hereditary transmission, educational influences, physical and moral, social and political institutions, &c. *Its forms and complications, curability*, and means of cure and prevention.

Adjourned until three o'clock, P.M.

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*Afternoon Session.*—The Association met as per adjournment.

Dr. WHITE, of the University of Buffalo, submitted the following resolution, which was carried:

*Resolved*, That the thanks of this Association be presented to Dr. J. KNIGHT, late President, for the very dignified, courteous and efficient manner in which he presided over its deliberations, and that he be respectfully requested to furnish the usual address for publication.

The committee appointed by the American Medical Association to

devise or consider some comprehensive plan for the more general, systematic, and thorough investigation of subjects connected with medical science, made a report, to which was appended the following resolution:

*Resolved*, That the American Medical Association hereby recommends all Medical Societies to establish, in accordance with the plan detailed in the foregoing report, special committees for the selection, investigation, collaboration, and publication, of all subjects of interest connected with medical science.

The resolution was carried, and the report and resolution was referred to the Committee of Publication.

Dr. ATLEE communicated to the meeting that he had received a letter from Dr. PARISH, Chairman of the Committee on Epidemics of New Jersey, stating that his report was yet unfinished, but would soon be ready for publication.

On motion, it was directed to be handed over to the Committee of Publication, when finished.

Mr. DAVIS presented some specimens of milk to the Association, which he explained would, if used, prevent many of the diseases to which children are subject, arising from using impure milk. He respectfully submitted the specimens to the consideration of the Association.

According to previous arrangement, the Association adjourned at four o'clock, P.M., in order to afford the members an opportunity to visit the country residence of Col. John O'Fallon by special invitation.

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*Third day, Thursday.*—Association met at nine o'clock, A.M., Dr. POPE, President, in the chair.

After the reading of the minutes, six additional Delegates were reported as having been registered since yesterday.

The names of several were reported as members by invitation.

Dr. ATLEE offered the following resolution, which was carried:

*Resolved*, That it shall be the duty of the Publication Committee to append to each volume of the Transactions hereafter published, a copy of the Constitution of the Association.

The following resolution, offered by Dr. GROSS, was also carried, and Dr. Gross was appointed by the chair, the committee designated.

*Resolved*, That a committee of one be appointed by the chair to inquire into the causes which obstruct the formation and establishment of our National Medical Literature, and to report the subject at the next annual meeting of this Association, or as soon thereafter as practicable.

Dr. J. BERRIEN LINDSLEY offered the following resolution, which, on motion, was referred to the Committee on Medical Education, with instructions to report at the next annual meeting of the Association:

*Resolved*, That this Association earnestly recommend to the few Western schools which still retain the rule of making four years' practice equivalent to one term at College, the abrogation of said rule, as holding out a strong inducement and temptation to young men to enter upon the practice of medicine with little or no preparation.

Dr. PAUL F. EVE, of Nashville, Tenn., submitted a resolution, which, after amendment, as follows, was carried:

*Resolved*, That a committee of three be appointed by the chair, to report at the next meeting of the Association, the best means for preventing the introduction of disease by emigrants into our country.

The Chair appointed Drs. DICKSON, GRISCOM, and E. D. FENNER, said committee.

Dr. LINTON, of St. Louis, offered the following, which was also referred to the above-named Committee:

*Resolved*, That in the opinion of this Association, quarantine establishments afford no protection to States and cities against the invasion of epidemics, such as cholera and yellow fever.

Dr. PENN offered a resolution to the following effect:

*Resolved*, That the members of the Committee of Arrangements, who are not members of the Medical Association, be invited to take seats in this Association, as members by invitation. Carried.

A communication was read from Dr. PEEBLES, Chairman of the Committee on Epidemics of Virginia and North Carolina, requesting to be excused from the Committee. The request was granted.

The following report of the Committee of Nominations was submitted by the Chairman, Dr. WHITE:

The Committee on Nominations, in fulfilling the duty imposed upon them, recommend the continuance of several of the special committees previously created, and the appointment of some new ones. They, therefore, submit the following list of chairmen of special committees, with the subjects to them committed:

Dr WORTHINGTON HOOKER, of New Haven, Connecticut, on Epidemics of New England and New York.

Dr. JOHN L. ATLEE, of Lancaster, Pa., on Epidemics of New Jersey, Pennsylvania, Delaware, and Maryland.

Dr. D. J. CAIN, of Charleston, S. C., on Epidemics of South Carolina, Florida, Georgia, and Alabama.

Dr. W. L. SUTTON, of Georgetown, Ky., on Epidemics of Tennessee and Kentucky.

Dr. THOS. REYBURN, of St. Louis, Mo., on Epidemics of Missouri, Illinois, Iowa, and Wisconsin.

Dr. GEO. MENDENHALL, of Cincinnati, Ohio, on Epidemics of Ohio, Indiana, and Michigan.

Dr. E. D. FENNER, of New Orleans, La., on Epidemics of Mississippi, Louisiana, Arkansas, and Texas.

Dr. JAMES JONES, of New Orleans, La., on the Mutual Relations of Yellow and Bilious Remittent Fever.

Dr. D. V. CONDIE, of Philadelphia, Pennsylvania, on the Causes of Tuberculous Disease.

Dr. JOS. LEIDY, of Philadelphia, Pa., on Diseases of Parasitic Origin.

Dr. A. P MERRILL, of Memphis, Tenn., on the Physiological Peculiarities and Diseases of Negroes.

Dr. JOS. N. MCDOWELL, of St. Louis, Mo., on Statistics of the Operation for the Removal of Stone in the Bladder.

Dr. F. P. PORCHER, of Charleston, S. C., on the Toxicological and Medicinal Properties of our Cryptogamic Plants.

Dr. DANIEL BRAINARD, of Chicago, Illinois, on the Constitutional and Local Treatment of Carcinoma.

Dr. GEO. ENGLEMANN, of St. Louis, Mo., on the Influence of Geological Formations on the Character of Disease.

Dr. HENRY TAYLOR, of Mount Clemens, Mich., on Dysentery.

Dr. HORACE GREEN, of New York, on the Use and Effect of Applications of Nitrate of Silver to the Throat in Local or General Disease.

Dr. P. C. GOOCH, of Richmond, Va., on the Administration of Anæsthetic Agents during Parturition.

Dr. CHAS. HOOKER, of New Haven, Conn., on the Diet of the Sick.

Dr. E. R. Dabney, of Clarksville, Tenn., on certain forms of Eruptive Fevers prevalent in Middle Tennessee.

Dr. Sanford B. Hunt, of New York, on the Hygrometrical State of the Atmosphere in Various Localities, and its Influence on Health.

Dr. Frank H. Hamilton, of Buffalo, New York, on the Frequency of Deformities in Fractures.

Dr. G. S. Walker, of St. Louis, Mo., on Diseases of the Prostate Gland.

Dr. H. A. Johnson, of Chicago, Ill., on the Excretions as an Index to the Organic Changes going on in the System.

Dr. Leroy H. Anderson, of Sumpterville, Ala., on Typhoid Fever and its Complications as it prevails in Alabama.

Dr. W. H. Byford, of Evansville, Ia., on the Pathology and Treatment of Scrofula.

Dr. N. S. Davis, of Chicago, Illinois, on the Nutritive Qualities of Milk, and the influence produced thereon by pregnancy and menstruation in the human female, and by pregnancy in the cow, and also on the question whether there is not some mode by which the nutritive constituents of milk can be preserved in their purity and sweetness, and furnished to the inhabitants of cities in such quantities as to supersede the present defective and often unwholesome method of supply.

Dr. M. M. Pallen, of St. Louis, Mo., on Puerperal Convulsions.

Dr. E. B. Haskens, of Clarksville, Tenn., on the Microscopical Investigation of Malignant Tumors.

Dr. Geo. K. Grant, of Memphis, Tenn., on the Sulphate of Quinia as a Remedial Agent in the Treatment of Fevers.

Dr. R. R. McIlvain, of Cincinnati, Ohio, on the Study of Pathology at the Bedside.

Dr. E. S. Cooper, of Peoria, Ill., on Orthopædic Surgery.

Dr. Andrew F. Jeter, of Palmyra, Mo., on the Modus Operandi of the Envenomed Secretions of Healthy Animals.

Dr. Samuel M. Smith, of Columbus, Ohio, on Insanity.

Dr. Rene La Roche, of Philadelphia, Penn., on the Jaundice of Yellow Fever in its Diagnostical and Prognostical Relations.

Dr. Charles Q. Chandler, of Rocheport, Mo., on Malignant Periodic Fevers.

Dr. S. B. Chase, of Portland, Maine, on Typhoid Fever in Maine.

*Committee on Plans of Organization for State and County Societies.*—A. B. Palmer, M.D., Michigan; R. R. McIlvain, M.D., Ohio; D. L. McGugin, M.D., Iowa; E. R. Peaslee, M.D., New Hampshire; Thomas Lipscomb, M.D., Tennessee.

*Committee on Medical Literature.*—Robert J. Breckenridge, M.D., Kentucky, Chairman; A. A. Gould, M.D., Mass.; D. L. McGugin, M.D., Iowa; J. B. Flint, M.D., Ky.; O. M. Langdon, M.D., Ohio.

*Committee on Medical Education.*—Wm. H. Anderson, M.D., Alabama; A. Lopez, M.D., do.; Andrew Murray, M.D., Michigan; A. Ramsay, M.D., Tenn.; R. D. Ross, M.D.

*Committee on Prize Essays.*—Rene La Roche, M.D., Pennsylvania; Isaac Hays, M.D., do; Alfred Stille, M.D., do; J. B. Biddle, M.D., do.; Geo. W. Norris, M.D., do.; Joseph Carson, M.D., do.; Joseph Leidy, M.D., do.

*Committee of Arrangements*—Isaac Hays, M.D., Pennsylvania; G. Emerson, M.D., do.; Wilson Jewell, M.D., do.; Alfred Stille, M.D., do; Francis West, M.D., do.; Wm. V. Keating, M.D., do.

*Committee on Publication.*—Pliny Earle, M.D., New York; D. Francis Condie, M.D., Pennsylvania; E. S. Lemoine, M.D., Missouri; A. March, M.D., New York; E. H. Davis, M.D., do.; C. R. Gilman, M.D., do.

Dr. Reyburn, of St. Louis, moved the acceptance and adoption of the Report, except so far as related to the Committee of Publication.

This motion gave rise to a lengthy and spirited debate. The question at issue was, whether the publication of the Transactions of the

Association should be removed from Philadelphia to New York. The committee reported in favor of the latter city, and the object of Dr. Reyburn's motion was to continue the publication in Philadelphia. Pending the discussion of this question, the Association adjourned until 3 o'clock, P.M.

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*Afternoon Session.*—The Association met agreeable to adjournment, Dr. POPE, President, in the chair.

On motion, Dr. W. S. MAUS, of Pekin, Illinois, was unanimously elected a permanent member.

Dr. ATLEE offered the following resolution, which was carried:

*Resolved*, That this Association earnestly recommend to their medical brethren, in those States in which Societies do not exist, the immediate organization of State and County Medical Societies.

Dr. PHELPS, of New York, read a long and able paper on the connection between Religion and Medicine, which, on motion, was referred to a special committee, consisting of Drs. Atlee, Sayre, and Marsh.

The unfinished business of the morning being in order, the question came up upon adopting the original report of the Committee on Nominations. A discussion arose, participated in by Drs. BRECKENRIDGE, ATLEE, SAYRE, STORER, MCDOWELL, WHITE, and others. It was, in character, much the same as that of the morning, becoming very animated, and at times personal feeling and sectional jealousy were evinced.

The original report of the Committee was at length adopted, which gave to New York the Chairman and a majority of the Committee of Publication.

After the vote was announced, the delegation from Philadelphia, through Dr. LA ROCHE, announced that they would take the responsibility of tendering the resignation of Dr. CONDIE, of Philadelphia, Treasurer of the Association. After some little discussion, the resignation of Dr. Condie was accepted.

Dr. WEST, of Philadelphia, one of the Secretaries, then tendered his resignation, and the question being upon accepting it, it was lost.

Dr. BRECKENRIDGE, of Kentucky, then offered the following resolution, which was carried:

*Resolved*, That hereafter the majority of the Committee on Publication shall be selected from the Physicians of that city in which the Association may annually meet.

A vote of thanks was then unanimously returned to Dr. CONDIE for the able, zealous, and impartial manner with which he had discharged his duties as Treasurer.

A resolution was reported to amend the Constitution, which provides that its annual meetings shall be held on the first Monday in May, and substitute the second Monday. The resolution, under the rule, lies over for a year.

Dr. EDGAR offered a resolution in regard to the compounding of medicine, and recommending apothecaries to use different colored paper in putting up poisonous drugs, with an appropriate stamp upon it, in contradistinction to other medicines.

Dr. GROSS informed the Association that the second volume of the work of the late Professor DRAKE, of Cincinnati, was now in the press at Philadelphia, and would be issued early in the present summer. The second volume, he said, was on Practical Medicine, and will be entirely independent of the first.

On the recommendation of the Nominating Committee, Dr. ISAAC WOOD, of New York, was elected Treasurer to supply the vacancy occasioned by the resignation of Dr. CONDIE.

On motion of Dr. ATLEE, thanks of the Association were tendered to the Committee of Arrangements, and to the profession and citizens of St. Louis, for the hospitality with which they have been received and entertained.

Dr. MUSSEY, of Cincinnati, was appointed to report at the next meeting, on the Effects of Alcoholic drinks in Health and Disease.

Several other resolutions were presented, and communications read, all of which were referred to committees. Adjourned.

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*Fourth day, Friday.*—The Association met at 9 o'clock, A.M., and, after an informal session, adjourned *sine die.*

After the adjournment, many of the delegates, with their families, joined in an agreeable excursion on the Pacific Railroad, which had been politely tendered to them by the authorities of said road.

Thus closed the seventh, and, to us, an exceedingly pleasant meeting, of the American Medical Association, one which will long be remembered with pride and pleasure by the Profession of this city.

On Thursday evening, a sumptuous entertainment was given to the Association, in the spacious hall of the Mercantile Library Company, by the Physicians of this city. Some six hundred guests sat down.—*Condensed from the St. Louis Med. and Surg. Jour.*

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*Observations upon Primary and Secondary Amputation.* By PROF. W. STONE, M.D., of New Orleans.—The principle of immediate amputation, although beyond all doubt correct, has caused the loss of countless limbs unnecessarily, and, I believe, of as many lives as it has saved. The error, evidently, is from over-estimating the security afforded by primary over secondary amputation. The first duty of the surgeon certainly is to secure, if possible, the life of his patient; and the second, to preserve as much of his person in as perfect a manner as possible. In the anxiety to fulfil the first duty, by over-estimating the security which amputation affords, limbs are often sacrificed that are curable, and by disregarding the proper time for amputation, a life may be lost that would have been safe without an operation. In severe injuries of the extremities, if fatal, death is produced either by the concussion, or subsequent pain and suppuration which exhausts the patient; or it may occasionally be from tetanus or gangrene. Against the first cause of death, amputation affords no security, on the contrary it favors it. The question of amputation before reaction, I believe, is settled by every American surgeon of experience in the negative. This subject was sharply discussed in England on the occasion of the death of the celebrated statesman, Huskisson, who had both legs or thighs crushed

on the Liverpool and Manchester Railroad. The Liverpool surgeons attempted to bring on reaction, but every means failed, the concussion had thrown him into a fatal collapse. The London surgeons took the matter up, blamed the Liverpool surgeons, and urged that immediate amputation should have been resorted to, and talked nonsensically of the stimulus of the knife. When one hears such reasoning, he feels the truth of the remark made by some one in the last century, that surgeons were bad pathologists and worse physiologists.

In severe injuries, where the patient is thrown into collapse and amputation is necessary or unavoidable, if the case is critical, it is a nice point to decide when, exactly, it can be performed with the most safety. If the patient were in great agony and amputation could relieve it, there could be no doubt of the propriety of amputating at once, no matter what the state of the pulse might be; but this is not the case, the shock has been received, the mischief has been done, the parts are in a measure paralyzed, and no very severe pain takes place until reaction. The question in such cases is, whether the injured limb is a greater source of pain than the stump would be after amputation, and considerable allowance should be made for the shock of the operation. The discovery of chloroform enables us in a great measure to avoid the shock of the stimulus of the knife, but not entirely. My experience is, that when amputation is unavoidable, it is best to do it as soon as reaction has fairly commenced, while the patient is under the influence of the first shock of the injury, the pulse flickering, etc.; any disturbance of the system, pain or loss of blood, might cause a fatal collapse in a case that would be perfectly safe managed with tact and judgment. By reaction I do not mean a full resistant pulse. The nervous system receives the shock and is the first to react, as is shown by the increased sensibility and improved capillary circulation before any perceptible improvement in the pulse is observed; this, however, soon follows, and the pulse becomes more steady. When the system is suffering from a severe injury, it is often the case that stimulants do not act as such when put upon the stomach. In extreme cases, when the patient is in danger from collapse, it is evident to me that the stomach does not absorb, but is nauseated, and all the depressing effects of nausea are produced. The rectum can scarcely be said to sympathize with the system in general, and always preserves an active absorbing surface. Stimulants given by injection produce a ready effect, and I always use my stimulants in this way where the patient is in danger, even when he is perfectly able to swallow, for they are much more prompt and effective. If too long a time elapses, after an injury, before amputation, the sensibility of the limb, which at first was partially paralyzed, becomes highly exalted, and although we can, by the use of chloroform, prevent the shock from the operation, we have a fresh wound in parts in a morbid state; the stump is much more painful, and as a general rule does not do as well as when the operation is performed earlier. By the above, I mean a state of the parts before any decided inflammatory action has taken place, and my firm conviction is that where no large joints are involved, or parts injured that will give extreme pain to the patient, he will have a better chance for his life if we give him a chance for his limb

also, even if we have to resort to secondary amputation; I mean if the most favorable period for operating has passed—*N. O. Med. News.*

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*Obstinate Quartan successfully treated with Chloride of Sodium.* By J. S. Wilson, M. D., of Ala.—Participating in the desire, now so prevalent in the profession, to obtain that great *desideratum*, a cheap and efficient substitute for the costly preparations of Cinchona, in the treatment of Intermittents, I have been induced to try common salt, in accordance with the recommendations of M. Piorry, Professor Dugas, and others. And as the desire alluded to can be consummated only by experiments and reports, to which each should contribute a share, I hope that no apology is necessary for reporting even a single case, especially when its interest is somewhat enhanced by an obstinacy which defied the more ordinary and established remedies.

Case. On the 24th March, I was requested to prescribe for G. W., a young man of sanguine temperament, and of sound constitution, naturally; but this had been impaired by frequent attacks of intermittent fever, which had produced, as usual, a pale cheek, and tumid spleen; these effects were accompanied by headache, mental and corporeal torpor, together with that indescribable sense of general indisposition characteristic of this abominable disease. And, as an evidence of the severity of the paroxysms, it may be added, that the last mentioned symptoms were persistent, continuing, more or less, on his "well days." He stated that several physicians had prescribed for him—that they had given him opium, and (perhaps) quinine, &c. &c., without "breaking them;" and I had, myself, several weeks previously, put him on Fowler's solution, with the same unsuccessful result.

*Prescription:* Blue mass, 10 grs., to be followed by castor oil, if necessary. Then, on chill-day, (26th,) begin ten hours before the time of the paroxysm, and take one of the following powders every two hours, with camphor mixture and laudanum, in willow-bark tea: R. Chloride Sodium, 360 grs. Make six powders.

27th. Says that he had his paroxysm at the usual time, and that it "shook him worse than usual;" pain in side (spleen) less, while fever was on: this was shorter, also. These symptoms considered favorable. *Prescription:* Omit all other remedies, and take 60 grs. chloride sodium, three times a day, on well days. Then begin nine hours before chill time, (29th,) and take 40 grs. of the same every hour, in warm gruel.

31st. Has had no paroxysm. Take Fowler's solution, 5 gtt. *ter in die*, as a prophylactic.

Remark.—The cure in this case must be attributed to the salt, as he took nothing else on 29th; for it can hardly be supposed that the gruel had any agency in it.—*South. Med. and Surg. Jour.*

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*Vesico Vaginal Fistula, complicated with Vesical Calculus, successfully treated by operation.* By W. H. Mussey, M.D., of Cincinnati, O.—Mrs. M., 24 years of age, was confined in September last with her first child. There was no discharge from the bladder till two days after the labor had terminated, at which time a very large

quantity of water came away "*suddenly.*" The discharge continued to be free, but uncontrollable, causing excoriations of the vulva. After attending three weeks, the physician made an examination, and discovered an "ulcer" on the anterior wall of the vagina. Three weeks later a fistulous opening in the vesico-vaginal wall was observed, and in November last, three successive attempts were made to remedy the calamity by operation, with only partial success.

On March 16th, I examined the patient and could pass my forefinger into the bladder, and proved the fistula to have a diameter of thirteen-sixteenths of an inch. The urethra was cut off from the bladder, excepting a strip of the superior wall, about the sixth of an inch in width.

At the second interview with the patient, she informed me that there was a stone in the bladder, which was readily perceived on the introduction of a sound.

On the 20th of March I proceeded, with the instrument of Mr. Civiale, to crush the stone. Several fragments were removed through the fistula, but owing to the position of the calculus, in the pouch and the contraction of the bladder from the impossibility of keeping it distended with fluid, it was feared the manipulations would cause too much irritation, and the completion of the operation was deferred. In the course of this operation, some *fibres of cotton* were removed, indicating the character of the nucleus. The patient, on coming out of the anaesthetic state, informed us, that when the "ulcer" was discovered, a lock of cotton, medicated in some way, was applied, and she "*never saw it afterwards.*" The next day several small fragments of stone were discharged, and on the second day, a lock of cotton with fragments of stone attached, passed through the fistula. This nucleus after being dried, was one inch and a half long, the greatest width five-eighths of an inch, and in thickness one quarter of an inch; the calculous coating was one-eighth of an inch in thickness.

The bladder was repeatedly washed out with tepid water, till it was evident that no more fragments of the calculous remained, as none could be detected by the fingers in the explorations.

On the 10th of April I attempted the closure of the fistula. In order that the patient should have the benefit of the anaesthetic state, she was placed upon her back. The hips were elevated, an assistant on either side supported the limbs, and held away the vulva, another assistant depressed the perinœum; for these purposes the instruments of Mr. Jobert de Lambelle (of the *Hotel Dieu*), were employed. The mucous surface of the vaginal wall, for half an inch in width around the fistula, (including its edge,) was scarified, and the stitches entered one-third of an inch from these scarifications, including the mucular, without penetrating the mucous coat of the bladder. The "Clamp Suture" of Mr. Sims, of Georgia, was employed to hold the freshened surfaces in opposition. Threads of silk, (five in number,) were first passed, then the silver wire was drawn through and fastened by means of the perforated shot, two slightly curved leaden bars one-eight of an inch in diameter, the anterior being one and a quarter and the posterior one and three-quarters inch in length. An elastic catheter was

kept in position in the Urethra, by means of tapes attached to a band around the body, the external orifice being depressed by means of a bit of sheet lead, so that the urine could not be conducted back into contact with the wound. This was removed and cleansed twice a day for three days, and after that once a day—the vagina and vulva being cleansed every day with tepid water, by means of a Glister Syringe.

The patient was kept on her back. On the ninth day the stitches were removed, but I was convinced that after the *sixth* day there was no tension upon them. There was a spontaneous evacuation of the bowels on the fifteenth day. On the eighteenth day the catheter was removed, and the patient allowed to rise.

On the twenty-seventh day of the operation, the patient returned to her home perfectly cured, there being no evidence that a particle of urine had passed the wound since the day of the operation.—*Western Lancet.*

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*On Chloroform in Rigidity of the Os Uteri.* By. G. W. Ronald, M.D., Physician to the Louisville, Ky., Almshouse.—It is not my intention, however, to enter into an inquiry as to the cause of the rigidity of the os uteri, but to call the attention of the profession to the use of chloroform ointment, as I have found it the most expeditious, reliable, and safe mode of overcoming it. I do not pretend to say that it is a specific, for my limited experience in its use would not justify such a conclusion, having used it in but a few instances, but in these, with the most gratifying results. The first time that I made a trial of it was in the Louisville Almshouse, on the 28th day of January, 1852.

Mrs. C. aged 23 years, at 7 o'clock on the morning of the 28th, was taken in labor. I saw her at 10 o'clock. Upon making an examination, the os uteri was sufficiently dilated to ascertain a head presentation, though the membranes were not ruptured. The pains were powerful and strong, continued to return at short and regular intervals, and I consoled myself with the thought that I should be detained but a short time, yet hour after hour passed and still the os uteri had made no perceptible progress towards dilatation. The woman had become restless and despondent, intense thirst, sickness at the stomach with constant retching, throwing off the water almost as soon as swallowed. If the os uteri was touched, she complained of pain, it was hot and unusually rigid, feeling as if a tight band or cord had been drawn around the neck of the organ, which was resisting and unyielding. Having waited upon nature to overcome the difficulty until the patience of the woman, as well as of her attendants was completely exhausted, I determined to resort to some of the remedies usually recommended. Accordingly the arm was tied, and blood abstracted to approaching syncope. Tartrate of antimony, and the warm bath, all in their turn were brought into requisition; yet the condition of the organ had changed but little, though the membranes at this time had given way and discharged a portion of liquor amnii. These means having failed to procure the desired effect, I went to the office for the purpose of making an ointment of belladonna, but was disappointed in

finding none in the house. When I was in the act of sending to town for the article, it occurred to me that the ointment of chloroform might as readily relieve rigidity of the os uteri, as contraction of the muscles of the extremities, which I had often seen it do, having had it applied to my own person in an attack of cholera, by my friend and preceptor, Dr. T. S. Bell. The ointment was prepared by taking one drachm and a half of chloroform and thoroughly incorporating it with one ounce of simple cerate; which was freely applied principally upon the external surface of the neck of the organ. At the time of the application the woman complained of slight smarting pain, which passed off in the course of a few minutes, and had it been applied at the commencement, or during contraction of the organ, she would have made no complaint, as was fully proved in the subsequent cases in which I used it. Upon making an examination, twenty-five minutes after the application of the ointment, I was surprised to find the os uteri dilating rapidly, soft and pliant; and in one hour and twenty-seven minutes after its first application the woman was delivered of a fine, robust, and healthy boy.—*West. Jour. Med. and Surg.*

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## EDITORIAL.

Cholera (?) in New York in 1854.—Again we are called upon to record the probable presence among us, of that scourge of nations, cholera. We say probable, for as yet (June 26th) no symptoms indicative of the inception of an epidemic of a grave character, have presented themselves to our observation. That there have occurred in several parts of our city, cases of cholera, and that a very large majority of these cases have terminated fatally, is clearly demonstrated by the testimony of several physicians, and by the official returns of the City Inspector during the last four weeks. An abstract of which so far as relates to this and kindred diseases, we give below. It is not our intention at present, to enter upon a consideration of all the material facts connected with the rise of the present disease, or of its relation to the sanatary condition of our city; our object being confined to a general statement of some of the facts which have been more recently developed. Within the last few weeks there have arrived at Quarantine, Staten Island, three ships, each of which lost passengers at sea, with a disease, resembling in all its characteristics, cholera. The first was the ship "North America," 27 days from Liverpool, with 768 passengers; arrived the 16th day of May. This ship lost 17 passengers during the voyage, and on arrival at Quarantine, several others were sick. The sick were at once admitted into the hospital, and the well were bestowed in the U. S. Store House, their persons cleansed, their clothing aired, and all supplied with good nutritious food. The period required for Quarantine of passengers in good health, is 48 hours. Within this period of detention, cholera broke out among these passengers, and out of 120 or over, that were attacked, about 70 died. The second was the ship "Progress," with 715 passengers, 32 days from Liverpool; arrived the 18th day of May. She lost 44 from the same cause, but her passengers were all healthy on arrival at Quarantine.

The third was the ship "Charles Crocker," 30 days from Liverpool, with 415 passengers; arrived June 3d, and lost 36 from the same cause. Her passengers were all subjected, after landing, to the same sanatary treatment, but no cases of cholera occurred among them while at Quarantine.

In regard to the appearance of the disease in this city, it is believed that about one half of the 128 deaths which have occurred during the four weeks commencing May 27th and ending June 24th, have been among recently arrived emigrants, who, regardless of all sanitary or hygienic regulations, have taken up their abodes in filthy, ill-ventilated, and already crowded courts, alleys or tenements. This was the case in Cherry, and Caroline, and Eighteenth streets, which were among the first which exhibited evidences of the approach or presence of the disease. At the present time, cases are mostly confined to crowded tenements, where large numbers are immured. But even here a thorough cleansing and ventilation causes the disappearance of the disease; *e. g.* as we are informed by Dr. Harris, in one of these human packing tenements, where there are one hundred and forty families in a house having a front of only forty feet, six fatal cases of cholera occurred between the 8th and 13th of June, in three apartments nearly adjacent; but upon purification of that portion of the premises, the disease has subsided. In another dismal and filthy alley in the same neighborhood, there occurred four fatal cases in the course of 48 hours, and the disease immediately subsided upon the free use of disinfectants about the premises.

That the disease, in question, has appeared without any of the usual prodromes of cholera, as seen in 1849, is asserted by many, but this view is by no means clearly substantiated by reference to facts, as the following comparative Tables show.

| 1849 | | | | | | | | | 1854 | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Week ending | Total Mortality. | Cholera. | Chol. Infantum | Cholera Morbus. | Diarrhœa. | Dysentery. | Other Diseases of the Bowels. | Tot. from Chol. & Dis. of Bow'ls | Week ending | Total Mortality. | Cholera. | Chol. Infantum. | Cholera Morbus. | Diarrhœa. | Dysentery. | Other Diseases of the Bowels. | Tot. from Chol. & Dis. of Bow'ls. |
| May 19 | 323 | 6 | — | 6 | 5 | 6 | 11 | 34 | June 3 | 415 | 12 | 5 | 12 | 7 | 16 | 5 | 57 |
| " 26 | 294 | 13 | — | 1 | 4 | 3 | 16 | 34 | " 10 | 408 | 14 | 6 | 5 | 11 | 7 | 8 | 51 |
| June 2 | 270 | 29 | 2 | 9 | 11 | 6 | 12 | 69 | " 17 | 429 | 57 | 4 | 5 | 6 | 2 | 5 | 79 |
| " 9 | 409 | 121 | 4 | 12 | 17 | 11 | 16 | 181 | " 24 | 437 | 45 | 13 | 8 | 11 | 5 | 4 | 86 |
| Total | 1296 | 169 | 6 | 28 | 37 | 26 | 55 | 218 | Total | 1689 | 128 | 38 | 30 | 35 | 30 | 22 | 273 |

There is one point which these tables show, which is worthy of notice, it is this: while "cholera" has been gradually ascending the scale of mortality, the usual gastro-intestinal affections of the season have descended in the scale. May this circumstance arise from the well recognized fact, that all diseases which are cognate with, are swallowed up by the prevailing epidemic? Be this as it may, there is no disguising the fact that there exists a tendency towards the formation

of an epidemic, and this fact has led the Boards of Health of this city and Brooklyn, to open a hospital in each city, for the treatment of epidemic diseases. The following is the first bulletin of the New-York Board:

MAYOR'S OFFICE, June 24, 1854.

The Mayor and the Commissioners of Health, in view of the possibility that the cholera may become an epidemic, have taken possession of the building No. 105 Franklin street, and are prepared to receive patients. This step we deem proper as a precautionary measure, although we are happy to state that the decrease in the number of cases, this week, is a favorable omen, and the disease is confined to no locality.

JACOB A. WESTERVELT, Mayor; EDWIN J. BROWN, President Board of Councilmen; NATHAN C. ELY, President Board of Aldermen; HENRY E. BARTLETT, M.D., Health Officer; WM. ROCKWELL, M.D. Resident Physician; JED. MILLER, M D., Health Commissioner; THOMAS K. DOWNING, City Inspector.

Commissioners of Health.

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## OBITUARY.

DEATH OF DR. J. E. WEBER.—Died in the city of Bonn, Prussia, on the 27th of March last, of phthisis, J. EDWARD WEBER, M.D., late of this city. We regret to be compelled to record the death of one who, although young, had already gained the admiration and estimation of the learned of our profession of this as well as foreign countries. Owing to gradually declining health, Dr. Weber had retired from the troubles of an extensive practice in our metropolis to re-establish his health. But it was of no avail, he died of phthisis pulmonum in the best of his years, just entering a career which would have undoubtedly brought him to medical fame and immortality. He was the son of M. J. WEBER, M.D. Prof. of Anatomy and Physiology at Bonn, and born in the year 1827. Although always sickly (he suffered from his 14th year of age, with asthma, bronchorrhœa, and with consecutive emphysema et bronchicatasis, which ran in the last years, contrary to all pathological rules, into tuberculous deposits in his lungs), he commenced, in his sixteenth year at the Frederick Wm. University, at Bonn, his medical study, and prosecuted it with the utmost diligence till he was promoted, *maxima cum laude*, to the degree of doctor of medicine, under the deanship of his father, after having defended his thesis on *The Effects of Chloroform* in 1848. Soon after his promotion, he emigrated to America, and served two years here, in the Ward's Island and Quarantine hospitals, as resident physician, where he took the opportunity to show his great talent and knowledge as a surgeon. Among his publications of interesting cases and successful operations, we only mention his operation for hydatids of the liver. If we peruse the description of this operation, we are struck with the deep mode of reasoning and thorough knowledge of surgical theory and action. If it was only for that operation he can be called a surgeon, whom to have lost so early, we must consider a great loss to our science. Previously to graduating, he published several articles of merit, among which was a prize essay, the subject of which had been proposed by the Minister of Education for several successive years. His last contribution to medical science was an article on the *Radical Cure of Hernia*, in the January number of this ournal, with which our readers are familiar.

Death of Prof. Patterson.—Henry H. Patterson, M.D., died at his residence in Philadelphia, on the 27th of April last, aged 88 years. Dr. Patterson was born in Philadelphia, on the 15th of August, 1815. The deficiencies of early educational privileges were supplied by an overcoming zeal and great power of application from within, and his whole life was characterized by that kind of ambition that made him studious, thoughtful, original, and strong in purpose. His medical preceptor was the late Dr. Joseph Parrish, and his degree of "M.D." was obtained at the University of Pennsylvania, in 1836, having presented a thesis "*On the Italian Doctrine of Counter Stimulus.*" Soon after graduation, he entered the Philadelphia Hospital, Blockley, as house physician, where he remained two years, after which he engaged in private practice. In 1848 he was appointed Professor of Materia Medica in Pennsylvania Medical College, which situation he held until the prostration of his physical powers, by chronic disease, compelled him to resign his chair in that Institution, upon which occasion the faculty unanimously made him Emeritus Professor of Materia Medica; a fit mark of their esteem and confidence. Dr. Patterson was a frequent contributor to periodical medical literature, and even while confined to his bed in his late illness, wrote that excellent Biography of the late Dr. Samuel George Morton, which is prefixed to the "*Types of Mankind.*"

Death of Dr. A. S. Wotherspoon.—Died in Washington City, D. C., on the evening of the fourth of May, Alexander S. Wotherspoon, M.D., in the 37th year of his age. The deceased was a native of this city. He was a graduate of the College of Physicians and Surgeons, of the class of 1841. Subsequently he was House Physician in the New York Hospital, and a contributor to this Journal. In 1843, he entered the U. S. army as assistant surgeon, the active duties of which he discharged with zeal and fidelity. Uniting a good degree of literary with much scientific attainments, he was particularly qualified for the statistical department of the Medical Bureau, and it was in this station that his services were more particularly rendered. Dr. Wotherspoon, as a physician, was much beloved in private practice. He was the medical attendant of President Taylor in his last illness. He died at the early age of 37, but not until he left the mark of a good name as a rich inheritance to his family.

Death of Dr. W. H. Macneven.—Died in Savannah, Ga., on the 12th of May last, of phthisis, William H. Macneven, M.D., of this city, aged 38 years. The deceased was a son of Prof. Macneven, of the College of Physicians and Surgeons, and afterwards of Rutgers' Medical College. He was a graduate of the College of Physicians and Surgeons in 1838. Our readers will remember him as the author of an exceedingly interesting paper, *On the Mode of Propagation of Cholera*, &c., in the second volume N. S. of this Journal, and also of several additional contributions to our pages. Dr. Macneven occupied, for several years past, the post of visiting physician to the Emigrant State Hospital, on Ward's Island. Possessing rare excellencies as a gentleman and physician, his untimely death is deeply deplored by the profession at large, as well as by his numerous friends.

# COLLEGE

OF

# PHYSICIANS AND SURGEONS,

## NEW-YORK.

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The regular Course of Lectures for the Session of 1854–5, commences on Monday, Oct. 19, 1854, and will continue *five months.* A preliminary Course of Lectures, free to all Students, will as usual, be delivered, commencing early in September.

*Fees for the Regular Course.*—Matriculation, $5; full Course of all the Lectures, $105; Graduation, $25.

### FACULTY.

ALEXANDER H. STEVENS, M.D., LL.D., President, and Emeritus Professor of Surgery.

JOSEPH M. SMITH, M.D., Professor of the Theory and Practice of Medicine.

JOHN TORREY, M.D., LL.D., Professor of Chemistry and Botany.

ROBERT WATTS, M.D., Professor of Anatomy.

WILLARD PARKER, M.D., Professor of Surgery.

CHANDLER R. GILMAN, M.D., Professor of Obstetrics,

ALONZO CLARK, M.D., Professor of Physiology and Pathology.

ELISHA BARTLETT, M.D., Professor of Materia Medica.

JOHN A. LIDELL, M.D., Demonstrator of Anatomy.

LEWIS A. SAYRE, M.D., Prosector of Surgery.

GEORGE T. ELLIOT, M.D., Assistant to the Professor of Obstetrics.

In consequence of the continued ill health of Professor Bartlett, the Faculty have made the following arrangements for the Session of 1854–5:—

Professor SMITH will deliver the Course on Materia Medica.

Professor CLARK that on Practice of Medicine, resigning the Course on Physiology to

Professor JOHN C. DALTON, of Buffalo University.

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JAMES KNOX, Janitor, resides in the College, No. 67 Crosby Street, and will aid Students in obtaining board, etc.

# UNIVERSITY OF NASHVILLE,

## MEDICAL DEPARTMENT.

The Fourth Annual Course of Lectures in this Institution will commence on Monday, the 30th of October next, and continue till the 1st of the ensuing March.

ROBERT M. PORTER, M.D., General and Special Anatomy.
J. BERRIEN LINDSLEY, M.D., Chemistry and Pharmacy.
C. K. WINSTON, M.D., Materia Medica and Medical Jurisprudence.
A. H. BUCHANAN, M.D., Surgical and Pathological Anatomy.
THOMAS R. JENNINGS, M.D., Institute of Medicine and Clinical Medicine.
W. K. BOWLING, M.D., Theory and Practice of Medicine.
JOHN M. WATSON, M.D., Obstetrics and the Diseases of Women and Children.
PAUL F. EVE, M.D., Principles and Practice of Surgery.
WILLIAM T. BRIGGS, M.D., Demonstrator of Anatomy.

The Anatomical rooms will be opened for students, on the first Monday of October.

A full *Preliminary Course* of Lectures, free to all Students, will be given by the Professors, commencing also on the first Monday of October.

A Clinique has been established, in connection with the University, at which operations are performed and cases prescribed for, and lectured upon, in presence of the Class. Arrangements have been made to accommodate all patients requiring surgical operations.

Amount of Fees for Lectures in the University is $105. Matriculating Fee (paid once only), $5; Practical Anatomy, $10; Graduating Fee, $25.

Excellent Board can be obtained for $3.00 per week. Further information can be obtained by addressing the Dean.

J. B. LINDSLEY, M.D., Dean of the Faculty,
NASHVILLE, TENN., March, 1854. No. 33 College Street.

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# Pennsylvania College—Medical Department.

### NINTH, BELOW LOCUST STREET, PHILADELPHIA.

### SESSION OF 1854-5.

The Faculty is constituted as follows:

| | |
|---|---|
| DAVID GILBERT, M.D., | Obstetrics and Diseases of Women and Children. |
| ALFRED STILLÉ, M.D., | Theory and Practice of Medicine. |
| JOHN NEILL, M.D., | Principles and Practice of Surgery. |
| J. M. ALLEN, M.D., | Anatomy. |
| JOHN J. REESE, M.D., | Medical Chemistry and Pharmacy. |
| FRANCIS G. SMITH, M.D., | Institutes of Medicine. |
| JOHN B. BIDDLE, M.D., | Therapeutics and Materia Medica. |

The Lectures will commence on Monday, October 9th, and continue until the 1st of March ensuing. A Medical and Surgical Clinic is held regularly twice a week at the College, and at the Pennsylvania Hospital. Second course students receive tickets to the latter Institution free of expense.

| | |
|---|---|
| FEES.—Matriculation (paid once only) | $5 00 |
| For each Professor's ticket | 15 00 |
| Graduation | 30 00 |
| Practical Anatomy | 10 00 |

The Dissecting Rooms will be open in the month of September.

For further information apply to

JOHN J. REESE, M.D., Registrar,
July, 1854. No. 122 S. Ninth St., Philadelphia.

## TO READERS AND CORRESPONDENTS.

THE following works have been received :—

*Archives de Physiologie de Thérapeutique et d'Hygiène.* sous la direction de M. BOUCHARDAT, Professor d'Hygiène à la Faculté de Médecine de Paris. No. I. Janvier, 1854. *Mémoire sur la Digitaline et la Digitale ;* par E. HOMOLLE and T. A. QUEVENNE. Paris : Baillière, 1854. 8vo., pp. 376. (From the Publisher.)

*The Modern Treatment of Syphilitic Diseases, both Primary and Secondary ;* comprising the Treatment of Constitutional and Confirmed Syphilis, by a safe and successful method ; with numerous Cases, Formulæ, and Clinical Observations. By LANGSTON PARKER, Surgeon to the Queen's Hospital, Birmingham. From the Third, and entirely re-written, London Edition. Philadelphia : Blanchard & Lea, 1854. 8vo., pp. 316. (From the Publishers.)

*A Clinical Introduction to the Practice of Auscultation, and other Modes of Physical Diagnosis, in Diseases of the Lungs and Heart.* By H. M. HUGHES, M.D., Assistant Physician to Guy's Hospital, etc. Second American, from the Second and Revised English Edition. Philadelphia : Blanchard & Lea, 1854. 8vo., pp. 304. (From the Publishers.)

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